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Vol. CLXXI No. 2234 WITH WHICH IS INCORPORATED THE GRAPHIC NOVEMBER 14 1942

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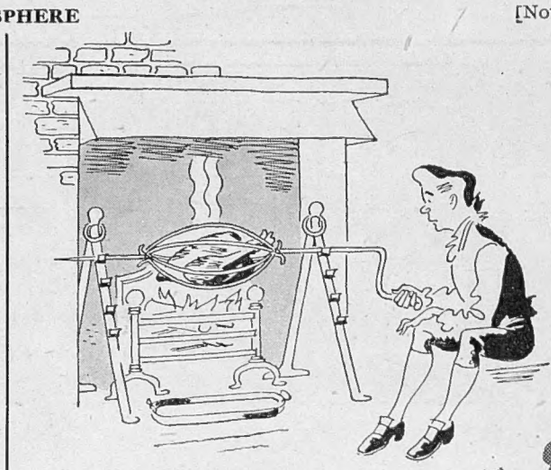

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Volume CLXXI No. 2234 The SPHERE, London, November 14, 1942

THE SPHERE
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The Empire's Illustrated Weekly

GENERAL MONTGOMERY, COMMANDER OF THE EIGHTH ARMY, PHOTOGRAPHED IN THE FORWARD AREA as he looked out from the turret of his American-built tank to witness his men pursuing the fleeing Afrika Korps on Wednesday, November 4

This picture was sent by radio from Cairo ; it was taken a few hours before London and the world received from Middle East Headquarters the dramatic communiqué which told of the decisive defeat of Rommel by the Eighth Army, and which made the statement that "the Axis forces . . . are now in full retreat." The British commanders were well up to the fore in the fighting which preceded the collapse of Rommel's defence. Air Vice-Marshal Coningham personally directed the massive fighter and bomber offensive ; and General Montgomery—as is demonstrated above—was on the actual battlefield as the victorious Eighth Army went forward

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A WAR NEWSLETTER —No. 167

1, NEW OXFORD STREET, W.1.

A Grand Job in the Desert.—We are entitled (fireworks on Guy Fawkes Day!) to be proud of our Army in Egypt. "Alexander's Ragtime Band," which the Duce's very latest slogan condemned to be kicked in the pants by the advancing Italians, has, under Montgomery, won lasting glory. The boot was on the other foot and the pants on the other buttocks. That is enough of boasting. We may justifiably be proud of a most glorious victory, fruit of the most careful planning and weighing of possibilities, a victory won by all arms and many allies, by the resolution of the Home Front, the tenacity of the Merchant Navy, the courage of the soldiers, sailors and airmen, and the skill and tireless efficiency of that Army Staff who only yesterday, in the sober judgment of the Strabolgis and the Goebbelses, were mere class-privileged amateurs playing at the difficult and dangerous game of war. We are entitled to say quietly: "Well begun is half-done." Montgomery *did* know what he was about and realises also the immense implications and possibilities of his first admitted success in a great campaign which may yet change the character of the war. And, for the second-front columnists, here at last is some colour for the theory that the desert may be staging a diversion which will be felt as far north as Lake Ilmen. But let our Home Front joy be sober and restrained. The last slogan of the Duce, the last confident orders of the day put out by Rommel, cry to a chuckling Olympus the folly of boasts, and are written (in the history of the desert campaigns of 1940-42) for *our* learning. Those lessons have been learned and splendidly used by Alexander and Montgomery in their terse, restrained bulletins, and it is up to us at home, and to all Press and radio commentators on the scene, to co-operate with them. Let us keep our breath for the forward march, which is not likely to be a picnic. The great victory of El Alamein will be a decisive battle in history, if only because it heralded the turn of the tide and opened the gate to the general Allied offensive which will end in the defeat of Nazi-ism. That victory was made possible only after the bitterest experiences of failure and lack of foresight had been taken to heart. And—sure as fate—ultimate victory will go to that side whose war leaders are men of sufficiently humble heart to profit by failure and set-back (inevitable in war); men who can slog on without boast or self-justification, stooping neither to threats nor taunts nor recrimination nor vainglory nor discouragement. Given those men, we may with some confidence label El Alamein as a useful British contribution to Hitler's Waterloo

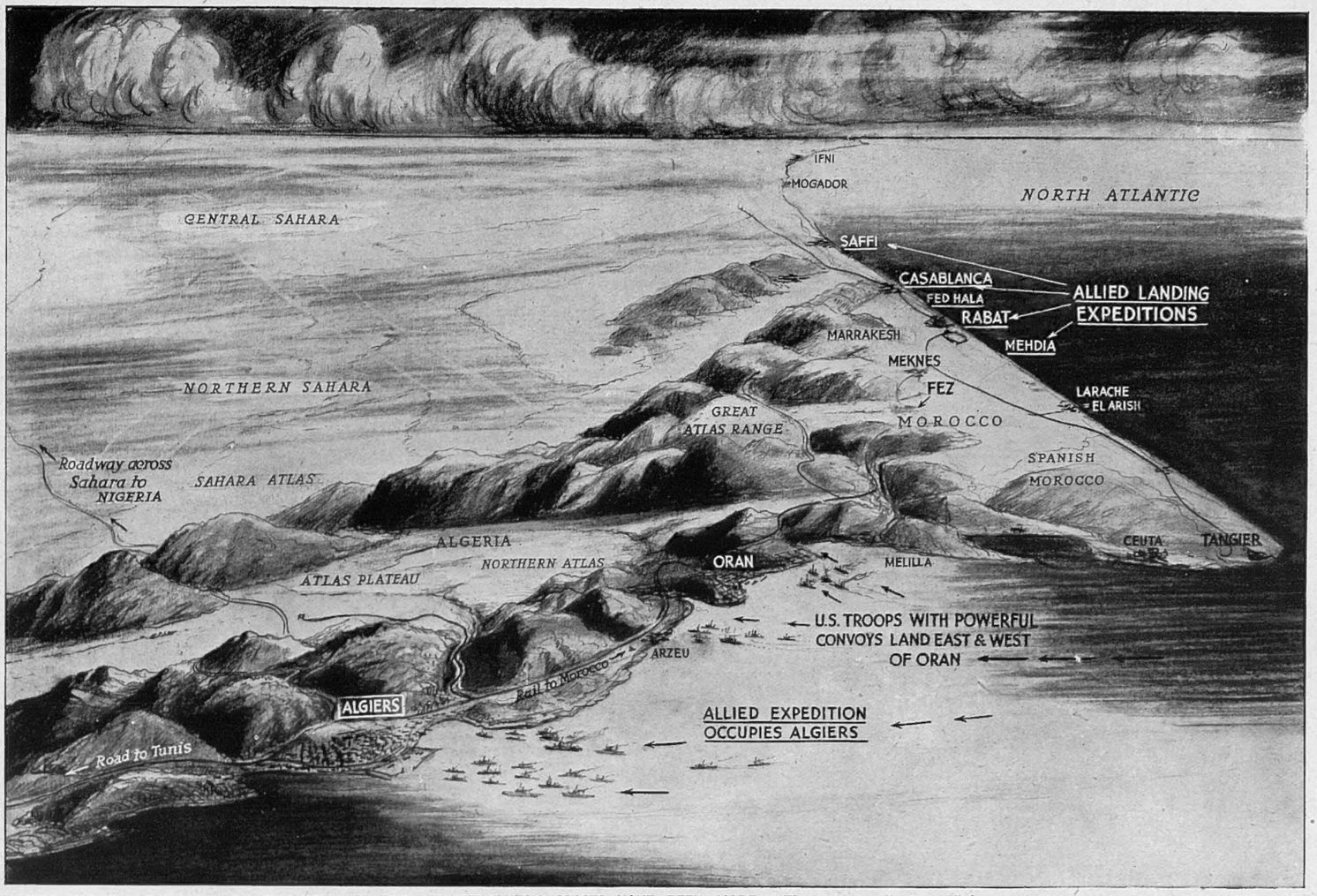
"Over to You."—Some of our pundits have told us lately that, subject to the usual condition that we don't become complacent, there is no reason why we should not indulge in a little hope, confidence and cheerfulness. As for the condition, my experiences of life, time and the bludgeonings of war satisfy me that we shall fulfil it. Any hint of complacency will be punctually ironed out by nasty jabs here and there. The idea is that, in the matter of the initiative, our enemies have given the "over to you" to our end of the ether, and that the Allies have changed over from the defensive to the offensive role. And this is true enough in various fields of the vast and complicated sea, air and land fronts. We clearly hold the initiative for the moment in the air over Western Europe and the seas in the approaches to Britain. In North Africa, we are the attackers (if the sun climbs slow, how slowly!). On the vast Eastern Front and in widely-separated areas of the Pacific, the Axis plans have been scotched or seriously delayed. And the guessing game is now for the moment the game of the Axis, with question-marks over many possible battlefields, from West Africa to Leningrad, from Norway to Burma. But if "over to you" means "it is your turn to do the talking," let us ration the talk and remember that more ideas come from listening than from talking and that in war, as in peace, ears and eyes are more useful than tongues. We need to keep our ears to the ground and our eyes skinned. For if the Axis is more than usually on the defensive, it has many shots and shocks in its lockers, and neither Germany nor Japan is likely to fold hands. To be caught talking is to be caught bending. We have not yet scotched the snake, much less killed him, and one blow has more effect than a dictionary of words. Let us then indulge in the authorised rations of confidence, hope and cheerfulness. But let them be silent confidence, hope and cheerfulness. There will be time and to spare for boasting when we can shut our eyes and stuff our ears with cotton wool. Angels and Ministers of *State*, defend us—from frantic boast and foolish word.

MRS. ROOSEVELT PAYS A VISIT TO QUEEN MARY: In this picture are seen, from left to right, the Duke of Beaufort, the Duchess of Beaufort, Mrs. Roosevelt, Queen Mary and the Princess Royal. The "First Lady's" stay with Queen Mary was made during a tour of American Army establishments, and Mrs. Roosevelt disclosed that her husband had "particularly hoped I should meet her"

Air Leaders from the Dominions.—A correspondent invites attention to the significant number of leaders in the Air Force who hail from the Dominions. The A.O.C., Bomber Command, is a South African. Raymond Collishaw, R.A.F. Commander, Western Desert, in the earlier phase, is a Canadian from Vancouver Island. Roderick Carr is a New Zealander. Sir Quintin Brand, who commanded No. 10 Group in the Battle of Britain, is a South African. Keith Park, also famous in the Battle of Britain, and Air Vice-Marshal Coningham are other instances from many which could be collected to prove, if proof were needed, that the British Empire is not a loosely-bound group of individual nations, but one family whose sons—and daughters, too—fit in to the jobs best suited to their qualifications in a single design and organisation covering the activities of that part of the world which is still painted red on current atlases and will be painted in the same colour after this war. None of the Empire's nations to-day is for itself. All are for all, and any corner of the Empire is home to each and all. The great leaders in the Dominions constantly voice this principle in their public utterances. To my mind, it is a constructive and corrective footnote to that vague and too obscure paragraph in the history-books which records the "incident" of the Statute of Westminster. That Statute (and this war, between them) achieved more than a regularisation of an attitude of mind which had grown up in the Empire in the years before. It (or the two together) transformed a loosely-knit household under one roof into a united family with common ideals and a common purpose and one great sprawling home.

Veni, Vidi, Vici.—There were no special war correspondents a hundred years ago, and none, I believe, 2,000 years ago. Nevertheless (as Lytton Strachey tells us in his slight and very inaccurate sketch of Mr. Creevey) there were apish, impish creatures who accompanied the march of History and revealed personal side-lights on the leading figures and their characters and thoughts in the hours of triumph or disaster—the letter-writers, diarists or gossip-mongers of their day. Mr. Creevey, with the journalist's flair for being in the right place at the right time, did the business very well for Wellington, in Brussels on the day after Waterloo. I sometimes think that the things men say in the hour of triumph (and women in the hour of agony) are sacred, and better left unrecorded. Yet a successful general may be forgiven a burst of vainglory when he has just achieved a military victory of first importance. Cæsar, Wellington and General Montgomery are alike in this feature—all were men supremely confident in their own powers. If the modern imps of History are to be believed, General Montgomery said to them: "I told Thoma that I came to the desert in August. In September I met Rommel. In October I beat him." This is *Veni, vidi, vici* with a vengeance; and a double vengeance, since it was said in the first instance to his beaten enemy leader. Myself, I prefer Wellington's "afterthought" to the other two *obiter dicta*. Indeed, with all allowances for the triumph of that moment for Montgomery, I prefer to think that the modern imps of History misquoted or twisted his precise words. For I feel sure that in his calmer moments he will, and even in his first triumph he *did*, give some of the credit to God and some to Alexander. He was generous enough to the men of all arms and nations who made the victory possible. The fact remains that no more recklessly confident statement was ever recorded as falling from the lips of a successful General on the field of victory. But then it may well be that the victory of El Alamein will prove in its way and in its rank among battles an even more crushing defeat for the enemy than was Waterloo.

An Immortal Hour.—The news of Sunday morning, November 8, gives us that frantic, glorious hope. If the American Army stands in the rear of Rommel's shattered armies, if France *commence à voir clair*, and sees, at last and fully, where her own interests and those of all civilised and free peoples lie, then El Alamein may prove a victory of such magnitude as neither Cæsar nor Wellington ever tasted, and we may even dream that that hour draws nearer than we dared to hope when the domination of tyranny and cruelty and lust will be broken, and peace and justice, brotherhood, humility and dignity in human and international relations, may return again to this scarred and shamed and shattered earth. Then indeed, and *yes* indeed, there is justification for a burst of triumph from a great general who knew well enough what forces were coming to complete the work of destruction he had so splendidly begun. There is importance in those words of Montgomery's, for one day the Historians will study and record them with infinite pains. The pulsing, constant interest, the thrill of possibilities, the consciousness of risks and set-backs, the dread of disappointment, the faith in the triumph of justice and common sense which will not be restrained or denied. It is one of the Great Hours in History. It is an Hour which demands from those who would use it well, all the resolution, all the calm, all the restraint, all the humility and greatness which centuries of experience and civilisation have given them a chance to acquire. THE OLD STAGER



WHERE THE U.S. LANDINGS ON THE ATLANTIC AND MEDITERRANEAN COASTS HAVE BEEN MADE. These, according to Vichy, occurred at a dozen places. In this diagrammatic view, the extreme tip of North Africa, Tangier, is shown on the right; in the immediate foreground is the Mediterranean (as seen from Gibraltar); and in the distance is the Atlantic Ocean—*Drawing by Percy Home*

THE U.S. LANDINGS IN NORTH AFRICA

Where the American Forces Landed; and the Officers in the High Command

On Sunday last the announcement was made that Allied expeditionary forces had converged on a number of ports and strategic points on the Atlantic and Mediterranean shores of Northern Africa. It is interesting to note that they are all within the Atlas Mountain region, Saffi being the most southerly on the Atlantic shore and Algiers the most easterly on the Mediterranean shore. The actual landing troops were American; they were conveyed to the various landing points in escorted convoys which are described as being of exceptional size. Algiers looms out as the largest of the places mentioned, both in the political and military aspects; it is the capital of a province of France and has important maritime trading connections with Marseilles.

The port of Oran, further to the west, was, as it were, enclosed within two landings, one at Arzeu to the east and one a little to the west. American Rangers, the counterpart of our Commandos, were employed in these operations. The east and west main railway line from Morocco to Tunis was cut in this area. The other landings and operations took place on the Atlantic shore at the points shown in the background of the above view. From Saffi northwards the various points connect by road and rail to northern Morocco and Algeria. Rabat aerodrome was among the points seized. The chief resistance was from naval units and shore batteries

LIEUT.-GENERAL DWIGHT D. EISENHOWER, Commander-in-Chief of the U.S. Forces in North Africa. Foremost tank expert of the American Army, General Eisenhower is fifty-two years of age, and was born in Texas. He is the third of six brothers and was prepared for his military career at West Point. When General MacArthur went to the Philippines, General Eisenhower went with him, to plan the defences of the Islands. In June last General Eisenhower came to London; and three weeks ago it was reported that he had been recalled to Washington. In point of fact, however, he was on his way to take up his new important Command

MAJOR-GENERAL MARK WAYNE CLARK, second-in-command of the American troops in North Africa. Forty-six years of age, he is the youngest U.S. Army general: he is the son of a soldier, and a West Point graduate. He is 6 ft. 3 in. tall, and served in the last war in France as a lieutenant. He was then wounded in action and awarded the Purple Heart

BRIGADIER-GENERAL JAMES DOOLITTLE, in command of the U.S. Air Forces in North Africa. This forty-five-year-old ace pilot led the American raid on Tokyo in April last. He came over to England early in August on an undisclosed mission. His rank would correspond with that of a British Air Commodore

GENERAL WALTER B. SMITH, Chief of Staff of the U.S. Forces in Europe, only arrived in London a short while ago. He is forty-six years of age and has been a member of the U.S. General Staff Corps since April 23

The LATEST RADIO PICTURES from the EIGHTH ARMY in EGYPT

AUSTRALIAN TROOPS, HELD UP BY A GERMAN STRONG-POINT, lay down a dense smoke-screen to hide their movements, and then rush in from all sides. This picture shows them advancing just before the strong-point fell

A PICTURE TAKEN IN THE THICK OF THE BATTLE just after the capture of the strong-point by the Australians; it shows a wounded German being helped back to a dressing-station by British soldiers

THE FLOWER OF ROMMEL'S ARMOUR STREWS THE DESERT: The remains of a German Mark IV. tank, knocked out and then finished off beyond repair by British Sappers, who take no chances of recovery by the enemy

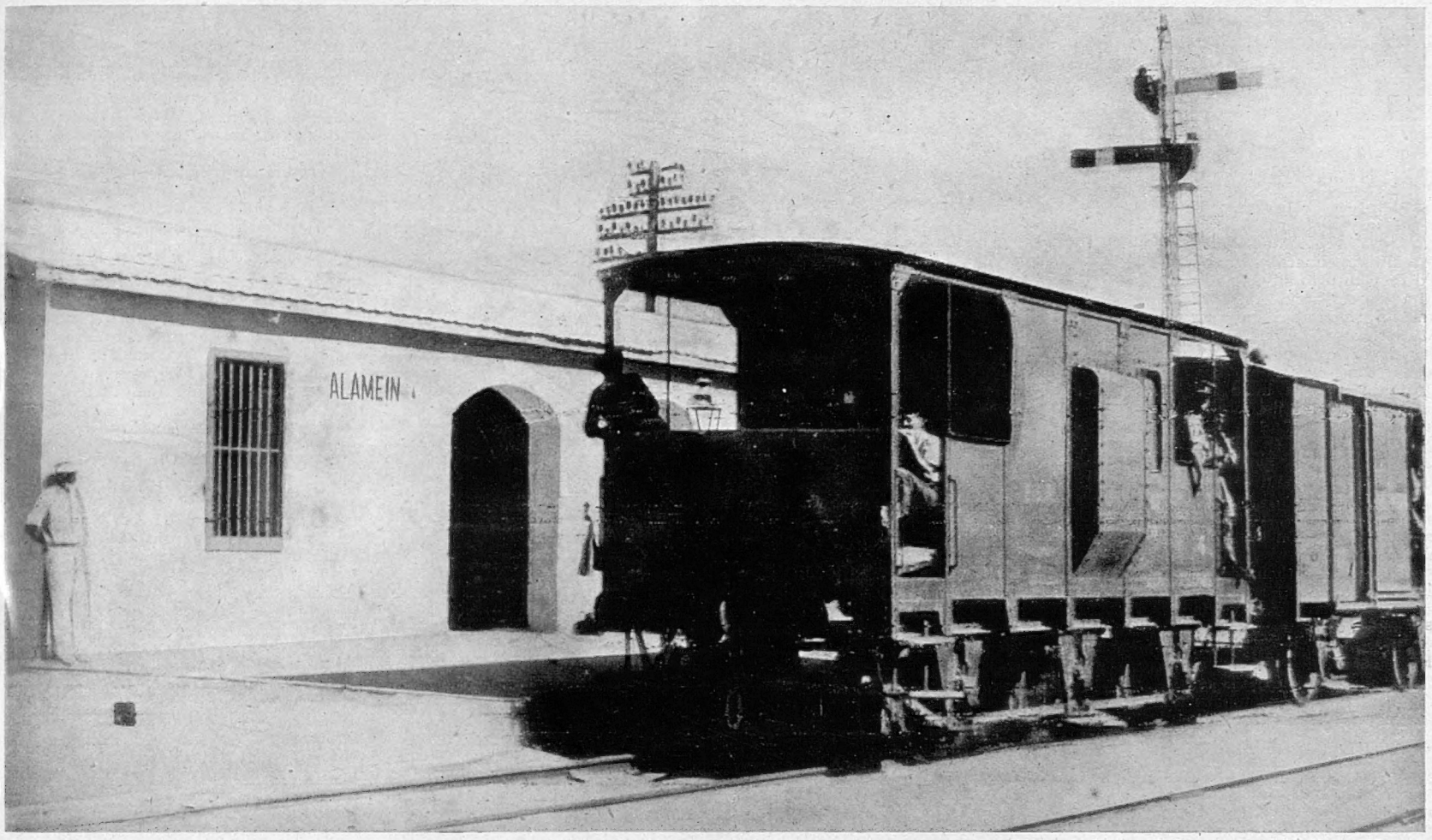
THE ADVANCE GATHERS MOMENTUM: Here a Bofors anti-aircraft gun advances through a recent battlefield before there was even time to bury the German dead, who were left lying on the ground by their fleeing comrades

Above—BOMBS FALLING FROM A FORMATION OF MITCHELL B.25 BOMBERS, as the R.A.F. continued its fierce "shuttle-service" pounding the retreating enemy

On right—BOMBS BURSTING AMONG FLEEING GERMAN VEHICLES ON THE DESERT PLAINS BENEATH. This picture was taken from one of the formation of Baltimore aircraft which "laid the eggs"

THE NEW GENERAL SHERMAN TANKS, which have played a large part in the latest desert battles. They are fitted with a 75-mm. gun turret : and their high speed came as an unpleasant surprise for Rommel

GENERAL MONTGOMERY, COMMANDER OF THE EIGHTH ARMY, tours the forward battle zone in his own tank. Here he is seen having tea with his tank crew : his active service attire is beret, sweater and slacks



THE "ALAMEIN SPECIAL" SPEEDS WESTWARD : This was the first train to pass through Alamein Station, on the Western Desert Railway, towards Mersa Matruh. The line was speedily repaired as the British troops advanced and is now functioning usefully for the Eighth Army

On left—GENERAL MONTGOMERY welcomes the captured Nazi General, von Thoma, at his desert headquarters : *Above*—The captured Commander of the Afrika Korps with the Commander of the victorious Eighth Army

PINNING PRUSSIA AS THE CURSE

What is the Truth About the Junker in Germany To-day?

By FERDINAND TUOHY

REMARKS made by Dr. Goebbels while touring Germany in the wake of R.A.F. raids have given wing again to an old idea—that of stigmatising Prussia in front of the other German States, in the hope that these will blame the Berlin Bully for their unhappy lot domestically and before the world. Goebbels said there could be no distinctions between Prussians and Bavarians, Saxons and Wuerttembergers. All, he inferred, had struck out together for the *Herrenvolk* policy and all must swim or sink together as a result. If the West and South German States allowed war weariness and strain to get the better of them, to the extent of their turning an accusing finger at Prussia, they would merely be playing into the hands of the enemy. He might have added that a greatly reinforced Himmler is there to see that they do no such thing.

Just about the same time in the last war—1917-1918—this idea of breaking off the Germans who were "different," from the Prussians, assumed a certain prominence. Charles Sarolea was a leading protagonist with his *German Problems and Personalities* (Chatto and Windus; 1917), from which I quote—

"A patriotic German might illustrate in the following simple parable the complex and strange relations between Germany and Prussia—

"'The German people a century ago might be compared to the heirs and owners of an ancient estate. The estate was rich and of romantic beauty. The heirs were clever, adventurous, and universally popular. But although devoted to each other, they could not get on together. Their personality was too strong, and they were always quarrelling. Nor could they turn to advantage their vast resources, and the natural wealth of the estate only served to attract outside marauders. They were so extravagant and so unpractical that they would lay out beautiful parks and build magnificent mansions, whilst neglecting to drain the land and repair the fences. They would spend lavishly on luxuries, but they would grudge food to the cattle and manure to the fields. Thus, with all their splendid possessions, the German heirs were always on the verge of bankruptcy.

"'To extricate themselves they decided to accept the services of a factor and manager. The factor was the Prussian Junker. He was an alien. For he could hardly be called a German. In blood he was more Slav than Teutonic. He was unrefined, unsympathetic, and overbearing. But as a manager he was splendid. He bought up outlying parts to round off the estate. He paid more attention to the necessaries than to the luxuries and the amenities of life. He was more careful to surround himself with a strong police force than with poets and minstrels. But he was able to keep out the marauders and the poachers. He was able to protect the property against stronger neighbours and to bully the weaker neighbours into surrendering desirable additions to the estate. In a short time the heirs, formerly universally popular, were cordially hated in the land. But their rents had increased by leaps and bounds, and the German estate had been rounded off and made into one solid and compact whole.'

"Such, German writers would tell us, is the parable of Germany and Prussia. The Germans are the gifted, generous, and spendthrift heirs to an illustrious domain. Prussia is the alien, upstart, unpopular, unsympathetic, bullying factor and manager. But to this bullying factor Germany owes the consolidation and prosperity of the national estate."

This author went on to emphasise that in the domestic and international policy of the Prussian State lay the evil spirit of war mania, the treachery, the brutality, the greed, and, above all, the predatory instinct of Prussian megalomaniacs who considered themselves a super-race predestined by Nature and Providence to the domination of the world. Prussia, moreover, was not a State at all, but an entirely artificial creation of the "will to power," made up of the spoils of successive invasions. So niggardly had Nature been to Prussia that the very population had to be imported into the dreary wastes of Brandenburg, Pomerania, Western and Eastern Prussia. Then there was this, as viewed from 1917—

"The Southern and Western German is still to-day, as he was in the days of Madame de Staël, artistic and poetic, brilliant and imaginative—a lover of song and music. The Prussian remains as he has always been, inartistic, dull and unromantic. Prussia has not produced one of the great composers who are the pride of the German race; and Berlin strikes the foreigner as one of the most commonplace capitals of the world. The Southern and Western German is gay and genial, courteous and expansive: the Prussian is sullen, reserved and aggressive. The Southern and Western German is sentimental and generous: the Prussian is sour and dour, and only believes in hard fact. The Southern and Western German is an idealist; the Prussian is a realist and a materialist, a stern rationalist, who always keeps his eye on the main chance. The Southern and Western German is independent almost to the verge of anarchism; he has a strong individuality; his patriotism is municipal and parochial; he is attached to his little city, to its peculiarities and local customs; the Prussian is imitative, docile, and disciplined; his patriotism is not the sentimental love of the native city, but the abstract loyalty to the State."

When the crack came in 1918, the one touch of the more amiable Southern and Western German may have been Prince Max of Baden's hastening the end despite the whole Prussian and Junker collection. Afterwards Southern Germany went "Red" for a few months, then drew back in horror, partly, no doubt, on account of its strong Catholic affiliations. West Germany was saved from red revolution mainly by the presence of the occupying armies.

It would be easy to add that subsequently an Austrian in Munich started a worse world curse than even Prussians had ever thought of, but that would not be quite accurate. Hitler was taken in hand from the start by Prussians working on behalf of the Junker, Von Seeckt, then laying the foundations of the next war by intricately taking care that the Prussian General Staff should not be disbanded. Hitler's first work was as an informer for that Staff, and he was lifted repeatedly on his way to power by the Prussian hand.

Hitler completely adopted Prussianism, and his coming from the South was of enormous value to the Prussians, bringing in, as it did, millions of Bavarians and others who mightn't have been so keen about a northern Führer. Munich became the Home of the Movement, and Stuttgart, in Wuerttemberg, the H.Q. of the Nazi World Movement. The Nazis, stiff with Prussians, took good care to spread Nazidom well and truly throughout every corner of Germany, and there it still is engrained across all State lines—north, south, east and west. The Gestapo octopus and Hitler's private S.S. shock-army have a nation-wide stranglehold such as never remotely existed a generation ago.

Nor should we overlook another great difference. The childhood and adolescence of *all* Germany are the most dreadfully bitten by the Nazi doctrine, and, in their present frame of mind, would batter the over-forty-fives even if it was their own father or mother who dared to criticise the régime. No such ferocious, ghastly young people paraded in 1917-1919.

On the face of it, the South and West German has this time been utterly poisoned by Prussia, operating through a crazed Pan-German from Vienna. If nothing could be done last time in the way of turning the war against the Prussians in the eyes of the rest of Germany, why waste a thought on attempting to do so now?

That may leave one or two things out of account.

In the first place, was there ever a concerted plan in 1919 to rebestow a de-Prussianised status upon South and West German? Clemenceau, when approached by a Bavarian delegation that wanted to join with the Tyrol, turned the proposal down flat. France was more interested in securing in permanence the bridgeheads of the Rhineland, and, as events turned out, it would have been an extremely good thing if others had not stopped her.

Next, this is the *second time* within a short span that Prussia has brought the world's detestation upon the German name, and vast grieving and suffering to Germans; South and West German may be more inclined now to hark back to their happier past than they were a generation ago.

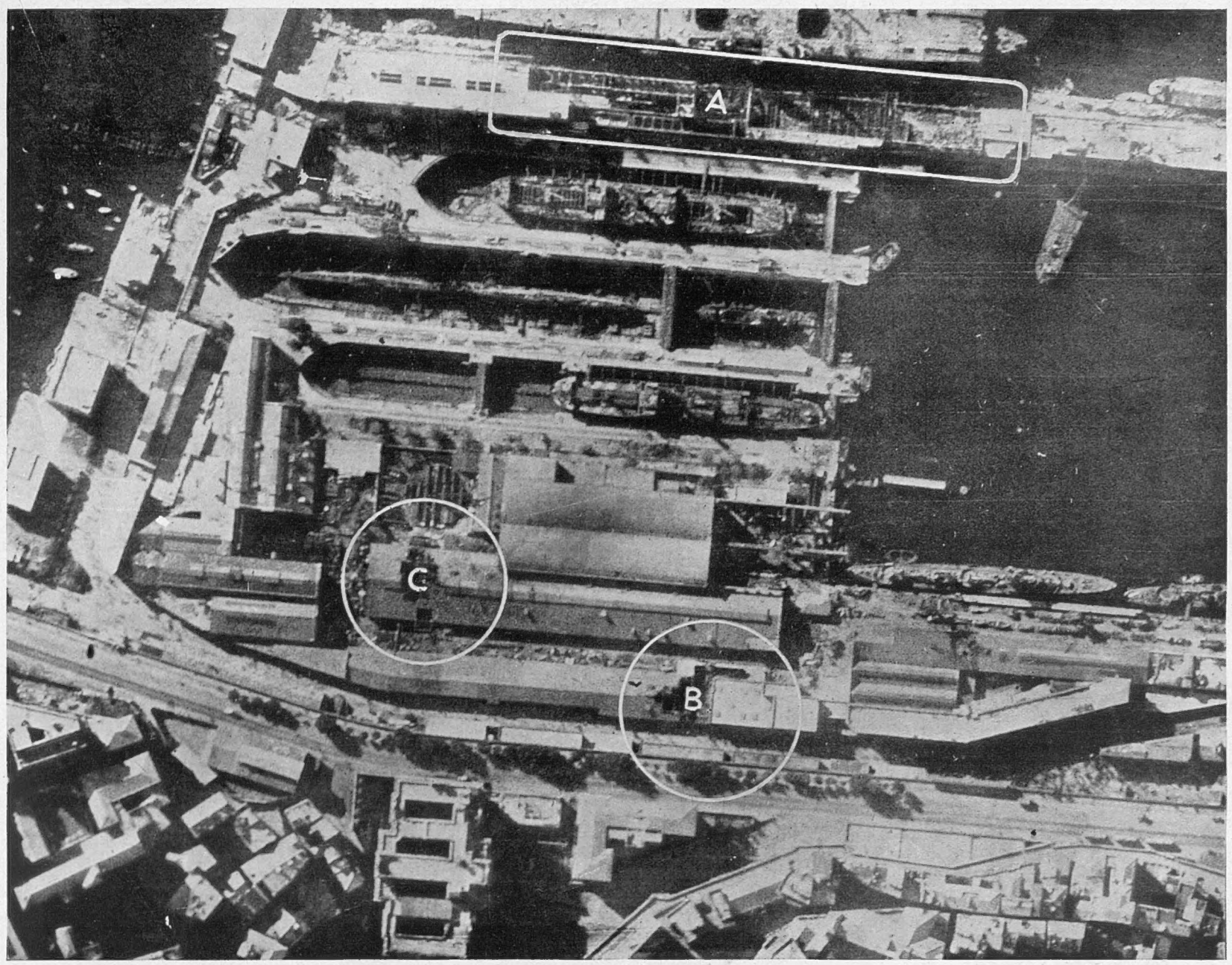
Thirdly, the Kaiser never indulged such bombastic boastings of certitude as his successor has done, and the sequel is already visible in the appearance of "Whenever Men" and "Whenever Women," people who ask eternally whenever is this and that going to happen, and, above all, whenever is the war going to end.

Fourthly, there are the air raids. Goebbels went on the road to tackle the effects of these, not so much the actual bombing of cities like Stuttgart and Munich, though each remembers how Goering promised immunity, as the effect of the wholesale evacuation of victims to South Germany and Austria. The more fortunate inhabitants of these regions are forced to lodge and even to feed refugees from the Ruhr and Rhineland and the (Hamburg) North, and we learn that "remarkable animosity" is displayed.

Fifthly, there is the constant undercurrent of religion. South and West Germany is predominantly Catholic, and whereas the Kaiser wasn't gunning for that faith, Hitler would demolish it at the first opportunity.

Without our putting any pretty hopes in the Southern and Western German—and what a nice fellow he used to be before 1870—there do seem to be one or two anti-Prussian possibilities for the composers of our leaflets, 61,000,000 of which were dropped on Germany in the first six months of 1942.

WHEN MUSSOLINI WENT TO NORTH AFRICA: Some weeks ago, when the enemy's forces were advancing with great speed towards Alexandria, the "junior partner" of the Axis thought that the moment had come when he could with advantage show himself to his victorious Legions and even take part in an anticipated triumphal march through the streets of Alexandria. Uniforms were ordered, and an impressive retinue accompanied the Duce to North Africa. Unfortunately for the Axis, however, the German-Italian forces were halted at Alamein, the march on Alexandria was halted, and the Triumphal Entry had to be postponed. Mussolini's participation in the Victory March, therefore, had to be described as a "visit to the Desert Battle-zone"! This picture, showing the Duce in one of his many theatrically grim attitudes, was taken during this visit

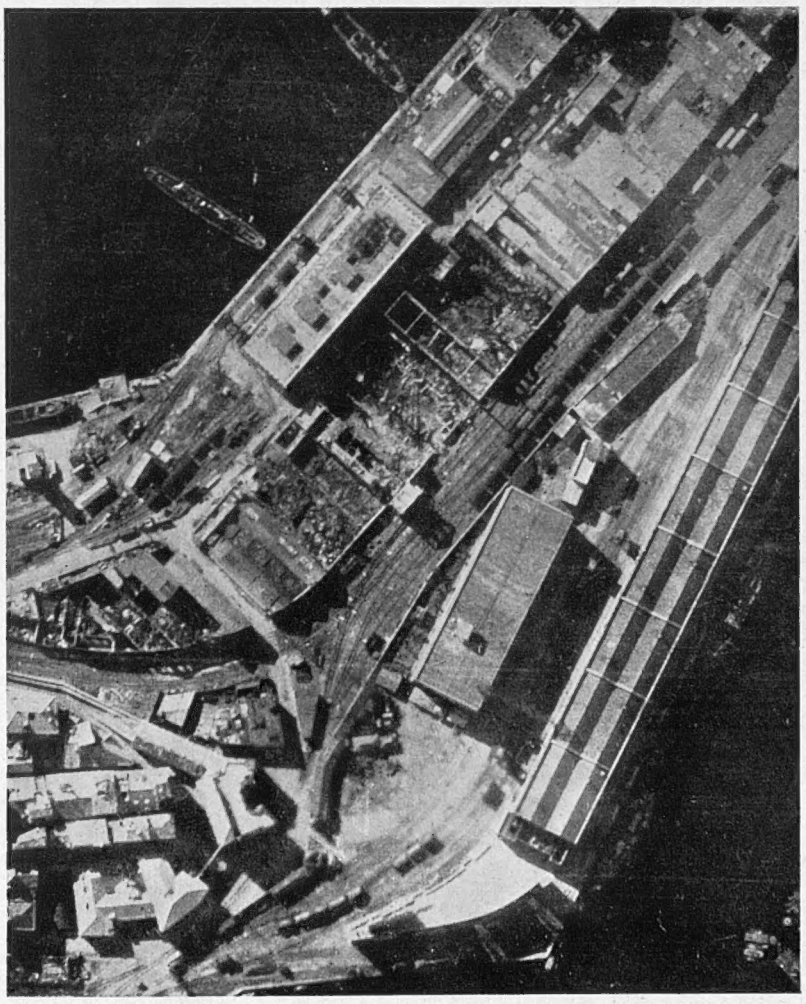


WIDESPREAD DAMAGE IN ITALY'S REINFORCEMENT PORT : The Ansaldo fitting-out yards at Genoa after the October raids : A—a long shed gutted over three-quarters of its length ; B—Fire damage at the west end of a long shed ; C—Damage to the roof of another long shed

BOMBS ON GENOA

The Port from which Rommel in North Africa is Reinforced

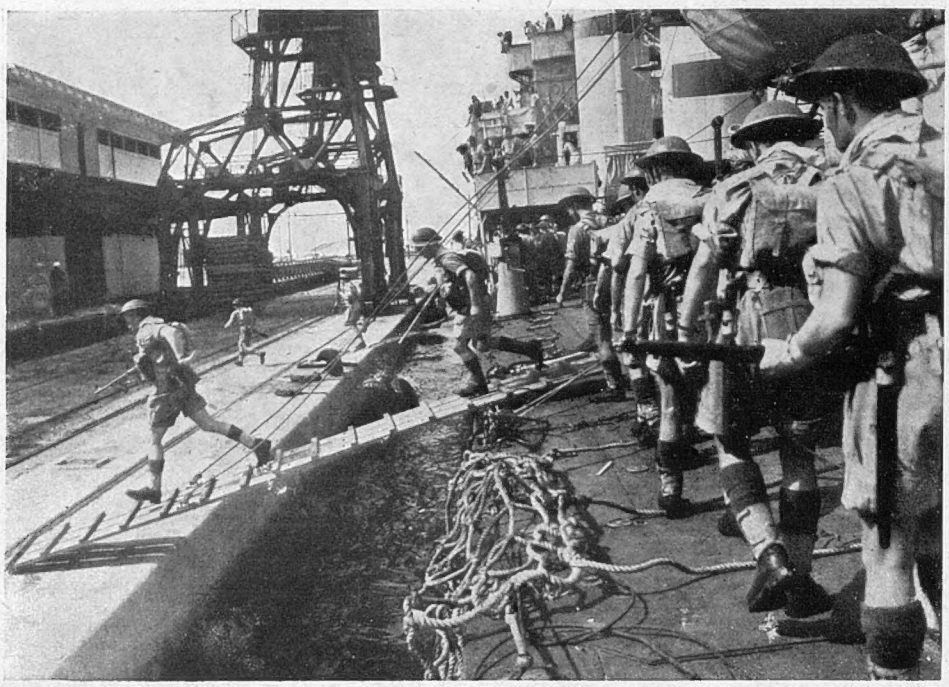
Genoa is the North Italian port from which supplies and reinforcements are shipped to the Axis forces in North Africa. These official Air Ministry pictures were taken after the raids on the nights of October 22-23 and October 23-24—and this damage has been increased in subsequent raids! Most of the damage is due to fire, and in the dock area a number of sheds of the Ansaldo fitting-out yards and several large warehouses have been gutted. It is estimated that, in all, there are about 77 acres in which more than half of all the buildings have been destroyed or seriously damaged. Included are two areas of devastation—27 acres in the dock area and 20 acres in the town, where many business premises and public buildings have been destroyed. The East Railway station (Stazione Brignole) has been almost entirely destroyed



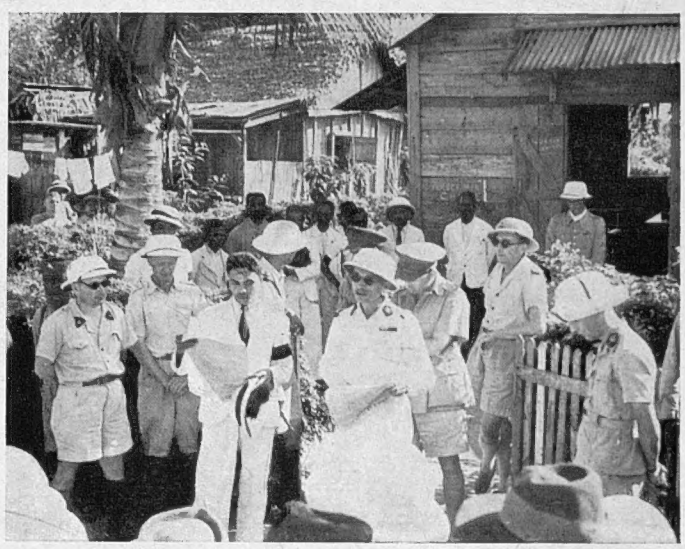
WAREHOUSES AND SHEDS COVERING AN AREA OF 2½ ACRES on the Molo Vecchio almost completely destroyed by fire at Genoa

THE "DRAUGHT-BOARD" EFFECT OF SHADOWS FALLING INSIDE ROOFLESS BUILDINGS indicates the extent of fire damage in the area south-west of the Piazza Corvetto, between the Villetta di Negro and the Via Venti Settembre. In this district of approximately 20 acres, more than half the buildings are gutted or seriously damaged by fire

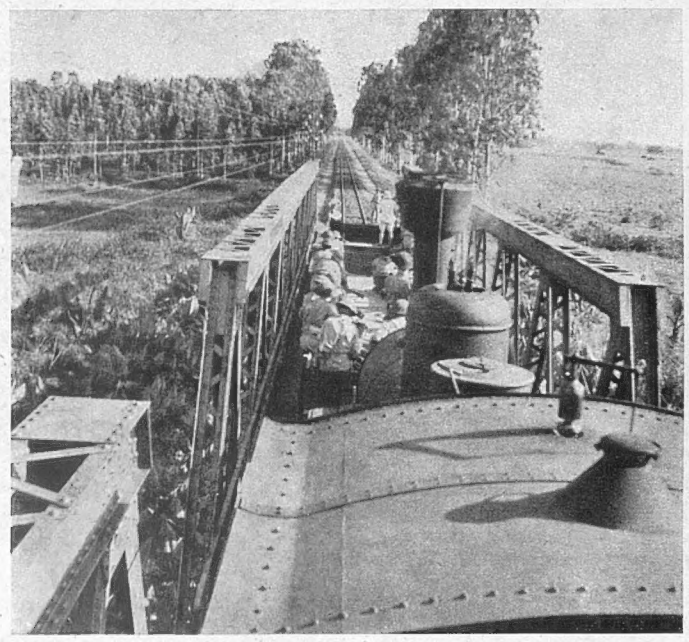
THE OCCUPATION OF MADAGASCAR



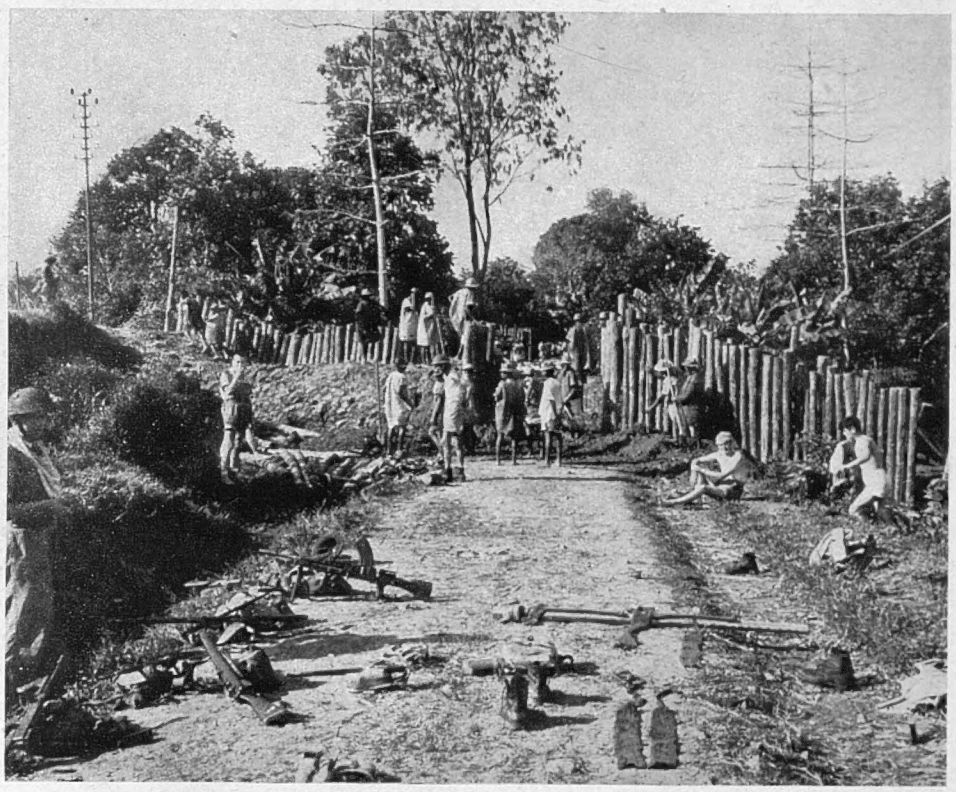
THE CAPTURE OF TAMATAVE, principal port of Madagascar : British troops disembarking on September 18. Warships directed a few shells at the defences before the town surrendered



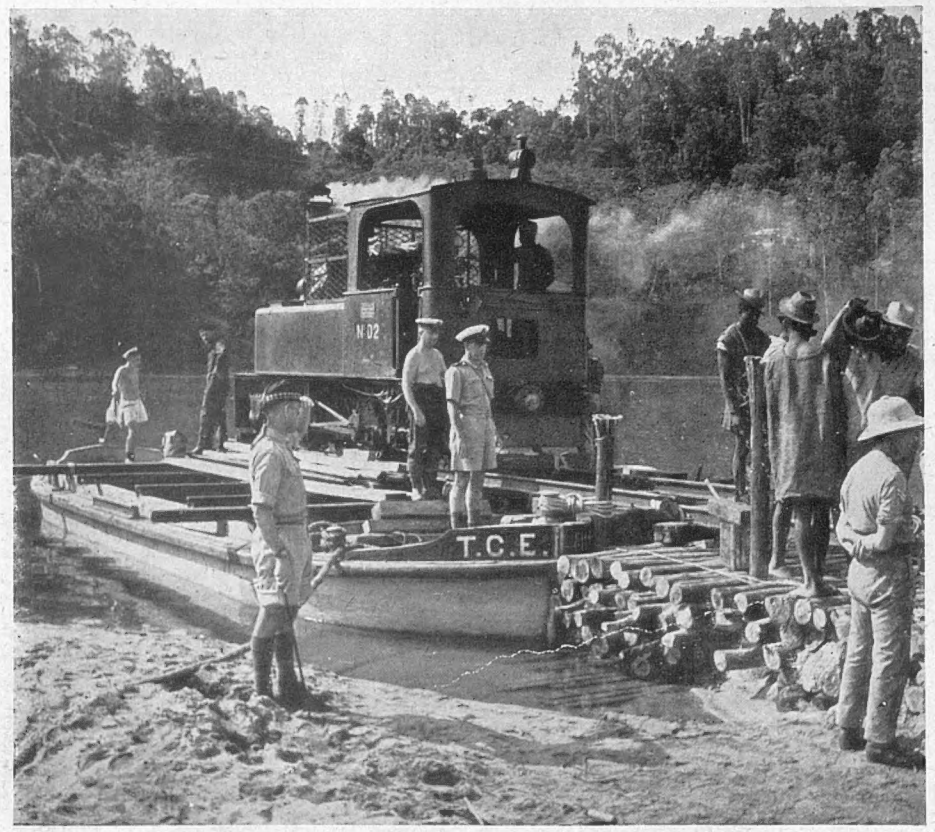
AS EACH TOWN WAS OCCUPIED, meetings of the residents were called and addressed by the Chef de Région, who read out the British Proclamation and appealed for complete co-operation



APPROACHING THE FIRST BRIDGE on the route from Tamatave to Brickaville : A party of British sappers are in the leading trucks to examine the bridge



A ROAD-BLOCK IN MADAGASCAR to delay the British advance through the island. Malagache labourers are here clearing one of many such encountered by our forces



A LIGHT ENGINE BEING BROUGHT BY SEA AND RIVER TO BRICKAVILLE with Naval co-operation. This was necessitated owing to two demolitions made by the Vichy defenders along the railway line in order to slow up the British advance

A PEACEFUL OCCUPATION : British sentries on the route to the aerodrome

The successful British advance through Madagascar from the port of Tamatave to the capital of Tananarive was carried out, *via* Brickaville, under severe handicaps. Road-blocks, burned wooden bridges and blown-up railway bridges proved severe handicaps to the progress of the British forces. The railway track was uninjured, but there were two demolitions near Brickaville which necessitated a portage of a mile or so, and a transfer of men and munitions to the other bank of the River Vohitru by ferry. Tamatave was occupied on September 18; and all resistance on the Island came to an end with the armistice on November 5

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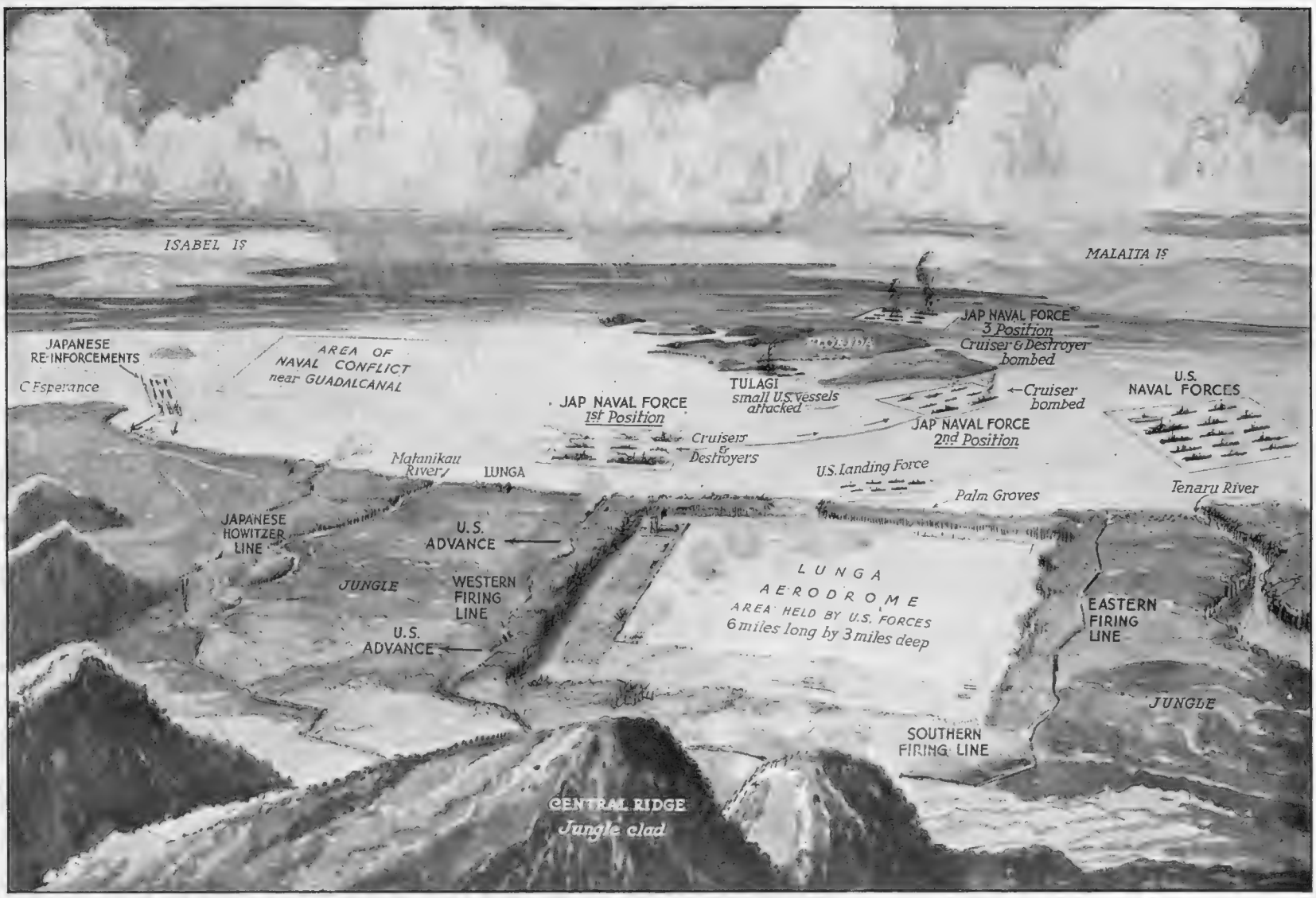


THE AREA OCCUPIED BY THE U.S. FORCES ON GUADALCANAL ISLAND IN THE SOLOMONS IS ONLY 6 MILES BY 3 MILES, with Lunga aerodrome at its eastern side. It lies on the north side of the island within sight of Tulagi and Florida, upon both of which U.S. forces are also established. The above view is taken from the jungle-clad hills of the interior, into which the Japs fled when the Americans first landed—*Drawing by Percy Home*

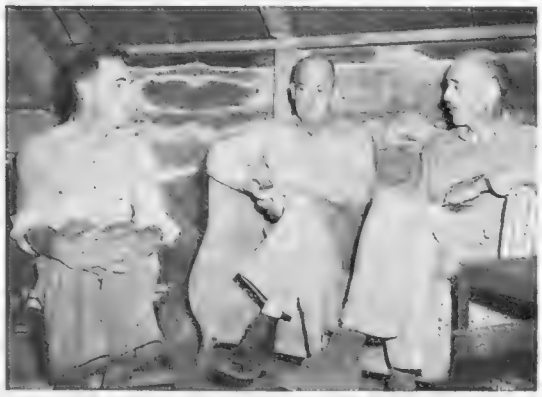
THIS IS AN AERIAL VIEW OF PART OF STRATEGIC LUNGA AIRFIELD on Guadalcanal Island: the picture was made as U.S. Marines chased out the Japs in the earlier phases of the Solomon Islands campaign. The area shown in the picture is a dispersal zone, with U-shaped revetments in course of construction. Each "U" could shelter an aircraft from attack

GUADALCANAL—The Fierce Struggle for the Smallest Theatre of War

The big aerodrome on Guadalcanal forms a not inconsiderable portion of the small area held by U.S. forces on the island. From east to west this fiercely-contested plot of ground measures but six miles; it extends inland to a depth of three miles. On all three land sides, the area is flanked by tropical forest growth and palm masses.

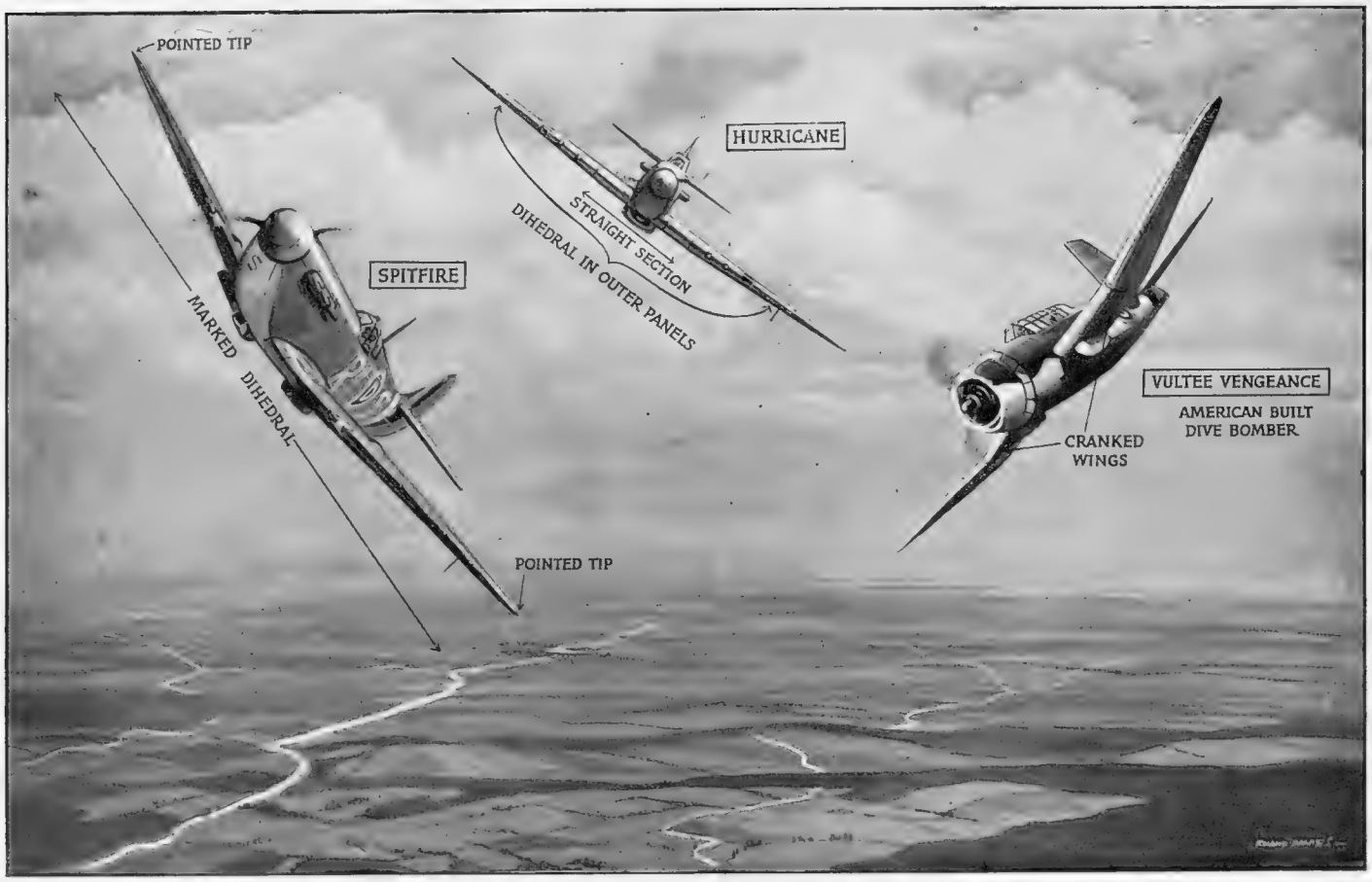
At first the Japs attacked from all three landward sides, but lately they have concentrated on the south and west. Their actual positions could not be located by the American pilots who were detailed to search for them, although Japanese reinforcements were known to be landed at points just east of Cape Esperance and to have made their way eastwards towards a river east of the village of Lunga.

Whilst this jungle-fighting was being waged upon the land, naval and air operations were taking place almost constantly on and over the waters to the north of the island. (These are known on the charts as Sealark Channel.) One Jap naval force, during the final week of October, approached the Lunga area and shelled the aerodrome until discretion suggested a withdrawal to the south of Florida Island. Here it was effectively attacked from the sea and suffered considerable loss. It proceeded to move round to the north of Florida, but here it was once more attacked by the U.S. Air Forces, more of its vessels suffering damage. Both sides have suffered losses, and both fleets have had to retire on occasion.



THE "HIGH COMMAND" IN THE SOLOMONS: Major-General A. A. Vandergrift (in centre), Commander of the Marines on Guadalcanal; Colonel Gerald Thomas (on left), his Chief of Staff; and Brigadier-General William H. Rupertus, Commander of the Marines on Tulagi

C



The War in the Air

WINGS— and WHY

Notes on a Subject in Which There Is More Than Meets the Eye

By PATRICK HAMILTON

***On left*—THREE TYPES OF WINGS, to illustrate various ideas in aeroplane design**

Drawing by Roland Davies

The British Hurricane probably has the straightest wing silhouette of any combatant aircraft to-day: the "dihedral" only appears in the outer panels. The Spitfire, on the other hand, has a marked dihedral and pointed tips. The U.S.-built Vultee Vengeance is an example of an aircraft with cranked wings. All three types of design are discussed in Mr. Hamilton's article

AS far as external shape (in plan view) is concerned, there appear to be as many styles of aeroplane wings as there are of women's hats. The neatly symmetrical wings of the Spitfire, for example, contrast very oddly with the square-cut planes of the Mustang. The famous Catalina, again, has wings almost as square as a ruler, while those of the British flying-boats, such as the Sunderland, are neatly tapered and curved. Many Axis planes—particularly the dive-bombers—have pronouncedly "cranked" wings, rather after the style of a seagull. Very few British machines have this feature, and then only in a slight degree, as in the Miles Master.

If the covering were stripped off the wings, still further differences would appear. Some have a single spar running down the centre; some have the leading edge made as a D-shaped girder, which takes all the load. Others have a blend of two-spar, D-spar and stressed skin construction. It is all a question of how many "foreign bodies"—guns, petrol tanks, retractable landing-gear, etc.—have to be accommodated in the wing apart from its pure function of providing the lift.

Actually, too, the most important feature of a wing is the thing we never ordinarily see—not its plan view, but its cross-section. Almost the only machine which is considerate enough to show its cross-section is the Catalina, when flying with the wing-tip floats down. Those with last-war memories will immediately note that whereas wings used often to have a slightly hollow, or concave, underside, most modern wings are slightly convex.

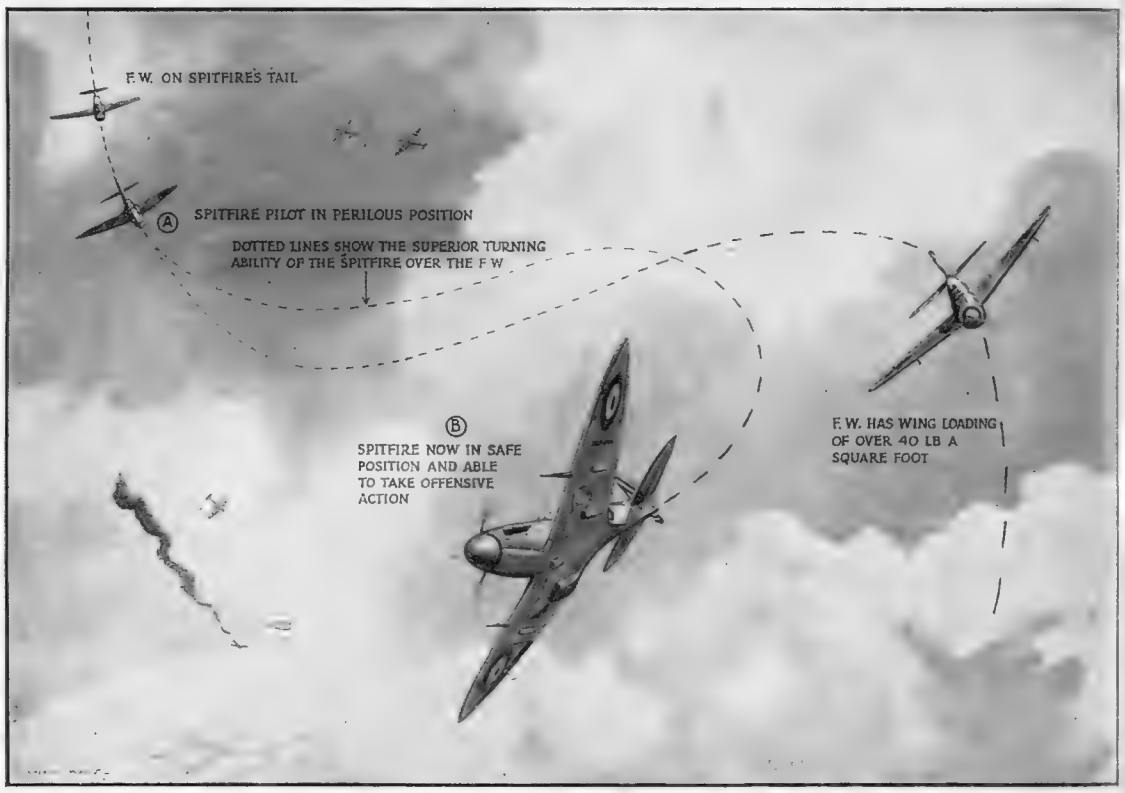
A stupendous amount of research has been done on wing sections since the last war. The designer, by the way, speaks of an "airfoil," not a wing. Thousands of cross-sections, differing only in infinitesimal degrees, have been tested in wind-tunnels and in actual flight. The designer refers to them by their code names—Gottingen 398, R.A.F. 45, Grant X-8, Eiffel 250—and knows the vices and virtues of each almost by heart.

Few problems are fuller of contradictions than wing design—one has to aim at perfect aerodynamic shape for good performance in the air. But with the perfect wing a plane would glide so far and sink so slowly that aeroplanes would need landing areas 30 miles across. So air-brakes and flaps have to be added to increase the gliding angle and make the wing less perfect. Again, we need large wings to make a plane stable laterally, and to keep the wing-loading low. But large wings make a fighter slow in "banking" and "peeling-off"—defects that are fatal in dog-fights. If we clip the wings to give manœuvrability, wing-loading goes up. High wing-loading adds enormously to the dangers of take-off. Some of the latest German bombers are loaded over 55 lb. per square foot—if one engine falters for a second before the safe height is reached, such a loading means an almost inevitable fatal crash.

Compromise, therefore, is inevitable. The Battle of Britain Spitfires and Hurricanes had wing-loadings of about 25 lb. a square foot, as against the Me. 109's 31 lb. per foot. Our machines being also faster, they had vastly superior aerobatic powers, and the Me. 109s were badly outclassed. The latest F.-W. is loaded to over 40 lb a square foot, and suffers badly in turning ability in consequence.

Generally speaking, a long, lean wing (or one with a "high-aspect ratio," as designers would say) has less drag, climbs better, has a higher ceiling, and better cruising range than a short, fat one. But the long, lean wing is heavier than the short, fat one, and makes a plane slow in banking. Designers strike the balance to favour the main purpose of the plane—fighters being usually given a lower aspect ratio than the bomber, since manœuvrability is the paramount feature in their case. Of course, the designer has to consider the human element, too. One could build a fast plane which could make a complete turn in less than 500 ft., whereas the normal radius is about 1,000 ft. But since the 500-ft.-turn would subject the pilot to a strain of about "12g" at normal speeds, whereas no man can stand more than "7g" without "blacking-out," there would be absolutely no advantage in so doing.

In balancing so many conflicting factors, the designer's skill is given full play. Despite the interference of military problems with aerodynamic ones, modern bombers approach very closely to the ideal. In a test recently made, a bomber was landed without the use of the brakes—it actually rolled for 5 miles before coming to a standstill! As far as strength is concerned, the evolution of the Spitfires and Hurricanes is sound testimony. Beginning as an eight-gun fighter, the Hurricane may now carry over half a ton of guns and shells in each wing. Bombs weighing 250 lb. each have been slung from them, extra petrol tanks fitted, and speeds and ceilings pushed up. Yet, as photographs of damaged machines testify, they have survived direct *flak* hits, collisions with masts and wireless-poles, fire and cannon-shells—sufficient evidence that skill in design and construction have here been perfectly matched.



THE ADVANTAGE IN MANŒUVRABILITY WHICH THE SPITFIRE POSSESSES OVER THE GERMAN FOCKE-WULF. The latter aircraft has a heavy "wing loading": consequently it is not so easy to manœuvre as the more lightly loaded Spitfire—*Drawing by Roland Davies*

The flaps of a modern aircraft increase the gliding angle for landing, and also make the wings less perfect so that the landing run can be shortened—*Drawing by Roland Davies*

FIFTEEN HUNDRED MILES TO GENOA AND BACK

The Wonderful Flight by Big British Bombers on October 22-23

—Drawing by H. P. Burton

Considerable damage was done to the port of Genoa in the attack made by aircraft of Bomber Command, and not one aircraft was missing after a journey of well over 1,500 miles. Our crews returned with reports of great fires in a close concentration around the target and of 4,000-lb. and 1,000-lb. bombs bursting on the objectives.

An Army anti-aircraft officer was in the attack. In his opinion the fires in the target area at Genoa were the most concentrated he had yet seen. He saw only one stick of incendiaries fall off the target.

"Till we reached the Alps," this officer said, "we were flying over thick cloud which cut off all sight of ground. When we reached the Alps the clouds cleared and I could see the mountains stretching on all sides for miles. Flying above them, I could see their snow-capped summits and the deep valleys between them.

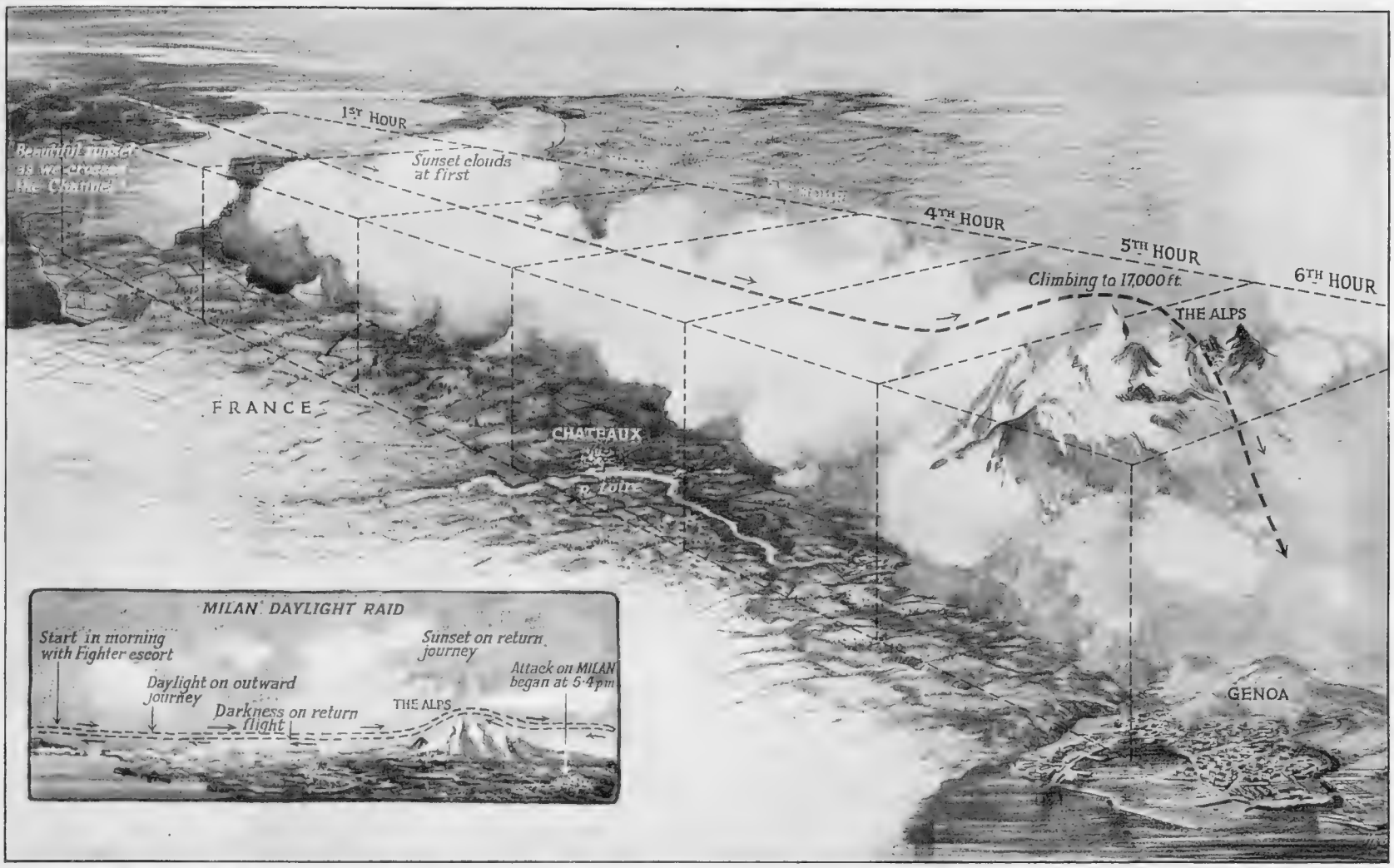
"As we came down on the other side of the Alps the valleys were shrouded in mist and we were afraid that Genoa might be obscured. But over the plain the weather cleared again. From 30 miles away I could see the light of the flares dropping over Genoa. As we got nearer it looked as though the whole town was ablaze."

A Flight Lieutenant with the D.F.C. has given a vivid impression of the long flight and the attack.

"As we crossed the Channel on the way out," he said, "we watched what was about the best sunset I have ever seen. We never saw land until we reached the Alps. The clouds above France were lit by the sunset glow. When the sun went down on our starboard side the full moon came up on our port, and the clouds were still lit up.

"Up-currents of air were driving the clouds away as we got to the Alps, the mountain-tops soared above the cloud in the moonlight. The mountains were glistening white and almost purple in the shadows. We saw a wide glacier. As we passed the Alps the clouds were disappearing, and the moon shone right down into the deep valleys. There was no mist or haze and we could see every river, lake and village.

"We were early on Genoa, so we circled over the Mediterranean. I think we and one other bomber were the first to drop flares. They went down at the same time, and showed up the harbour, lots of buildings and streets. At first I thought they were the shimmering white haze above Genoa, but it was only the whiteness of the town, which has a great many white buildings."



THE BOUNCING TORPEDO

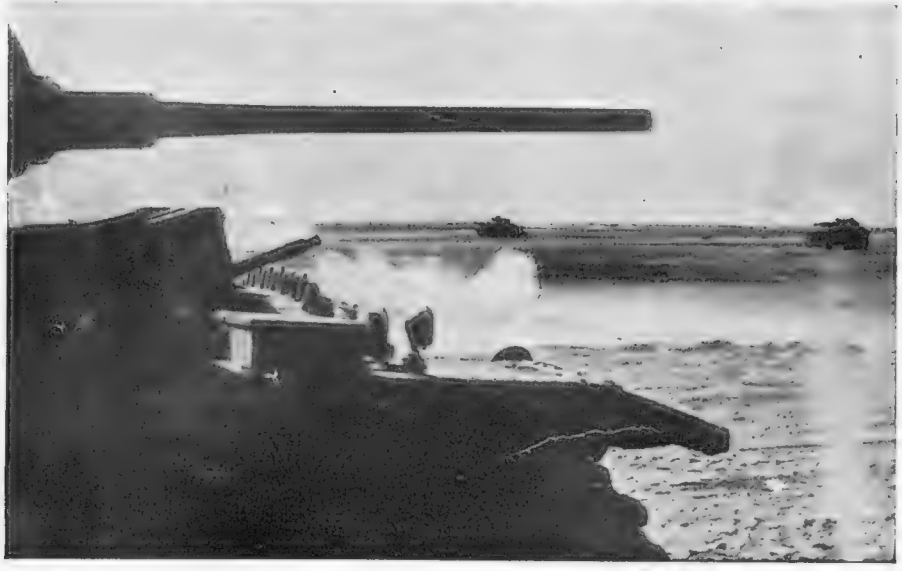
An Incident During the Convoy to Russia, When German Torpedo Bombers Attacked the Merchantmen

—Drawing by Roland Davies

When the forty torpedo-carrying aircraft of the *Luftwaffe* went in to the attack of the recent Convoy to Russia, they attacked in line abreast only 30 ft. above the water (as previously recorded in these pages). It was during this attack that the incident recorded here took place. A Heinkel was coming in to the attack, and evidently he dropped his torpedo from too great a height or too *low* a height. The great missile struck the water at the point marked **A** in the above drawing, and it then somersaulted to the point **B**—when, of course, it was set in the wrong direction! Torpedoes dropped from above must be released at the exactly proper height, otherwise it is difficult to predict the course the torpedo will take!

THE MOST DANGEROUS TASK OF ALL ON THE EGYPTIAN BAT
MINEFIELDS so that the tanks of the Eighth Army can go forward to
face of artillery opposition and under bom

Before the great offensive could open in earnest, it was necessary that the enemy minefields be cleared, so that tanks and other vehicles could go forward in support of the infantry. During the weeks of preparation before the British assault, the Axis had sown big minefields all along the comparatively short front from El Alamein to the Qattara Depression : these were made up of the long "box mines" of the Italians and the smaller, shallow "Tellers" of the Germans. Each mine was buried beneath the surface, and each was capable of immobilising instantly any tank or lorry which detonated it. To locate and clear the minefields, sappers went



On left—**KNOCKED-OUT GERMAN ARMOUR ON THE BATTLEFIELD AFTER THE FIRST TANK BATTLE : The first battle between the armoured vehicles developed in the afternoon of October 28. The Germans did not come off too well in the clash, and the battlefield was strewn with the battered hulks of their tanks at the end of the conflict**

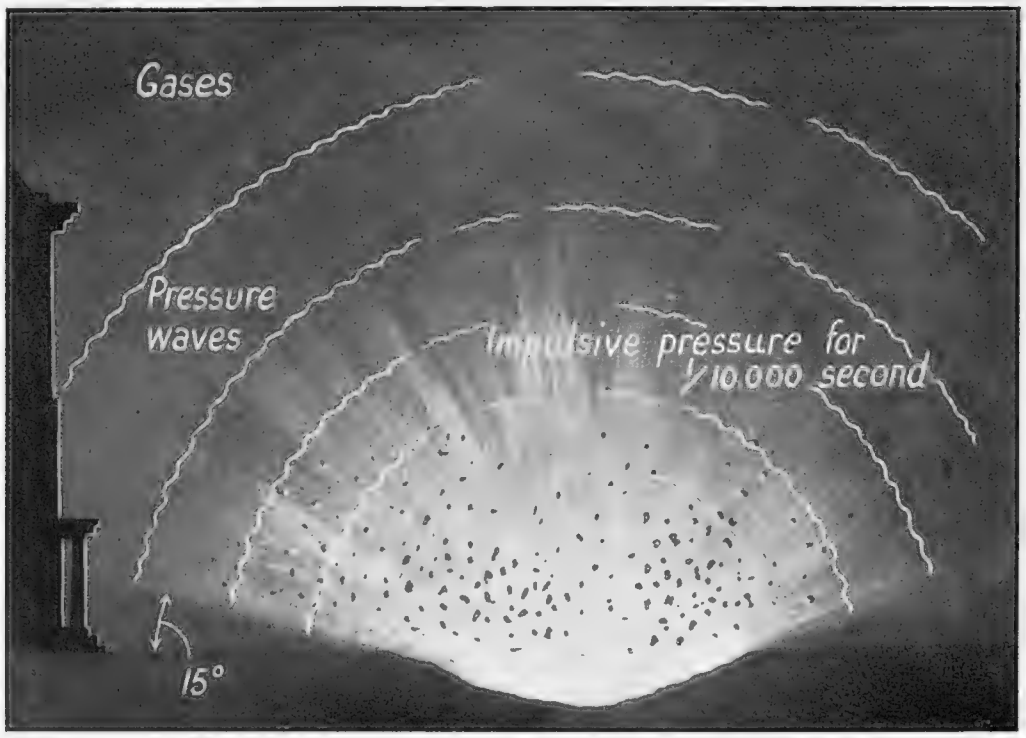
LEFIELD: SAPPERS, UNDER SHELL-FIRE, CLEARING AWAY THE ENEMY'S he attack. When the offensive opened, this work was performed in the mbardment from the air.—*Drawing by Edward Osmond*

orward with electro-magnetic devices: but many of them had only their bayonets with which to work. With these they prodded the earth as they worked forward in rows, and further parties of sappers, following up in the rear, dug the mines out as they were located and rendered them harmless by removing the fuses. This work had to be carried out in the open under heavy enemy artillery fire and under bombardment from the air. But, finally, lanes were made through the danger areas and the heavy armour and supply vehicles were able to go through and support the advancing infantry moving up on foot

On right—**AN INCIDENT DURING THE FIRST TANK BATTLE: A picture sent by radio from Cairo, showing the survivor of a knocked-out German tank surrendering to British infantry on the afternoon of October 28. On the Alamein front the area for manœuvre was so confined that tank engagements were nowhere on the large scale of previous battles**

THE BOMBS OF THE R.A.F.

The Power of Their Expanding Gases Shown in a Series of Special Diagrams by *L. Ashwell Wood*



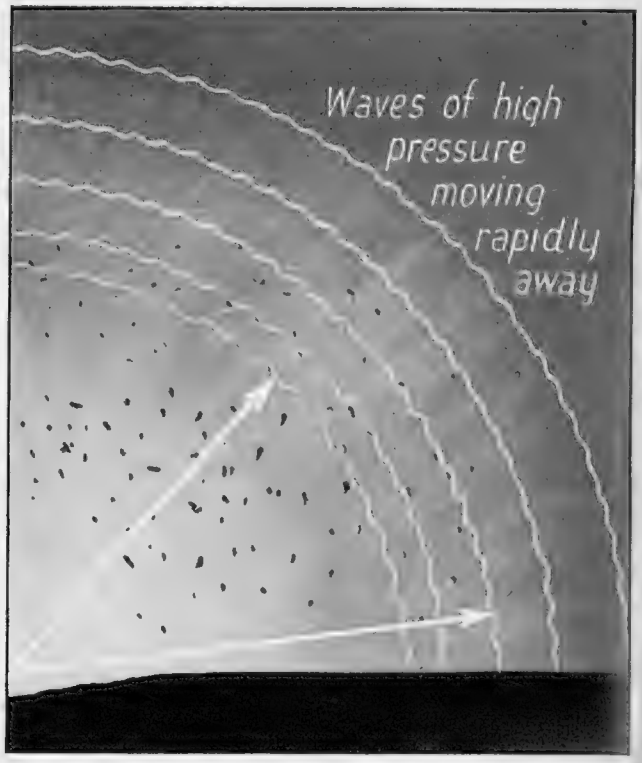
1. When a bomb explodes, the high explosives within are converted into gases of many times their volume. These blow the casing into fragments: expanding with terrific speed, they then cause high-pressure waves to be set up, and these waves are then followed by a pocket of rarefied air

The use of the 8,000-pounder bomb (known to the Germans, owing to its destructive effect, as the "Block Bomb") has caused the most widespread havoc throughout enemy territory. The tremendous amount of high explosives packed into these giants has disintegrated whole blocks of buildings and caused the collapse of rows upon rows of houses—as, indeed, aerial photography over bombed towns has demonstrated. The 4,000-lb. bomb has, likewise, wrought much damage in Germany.

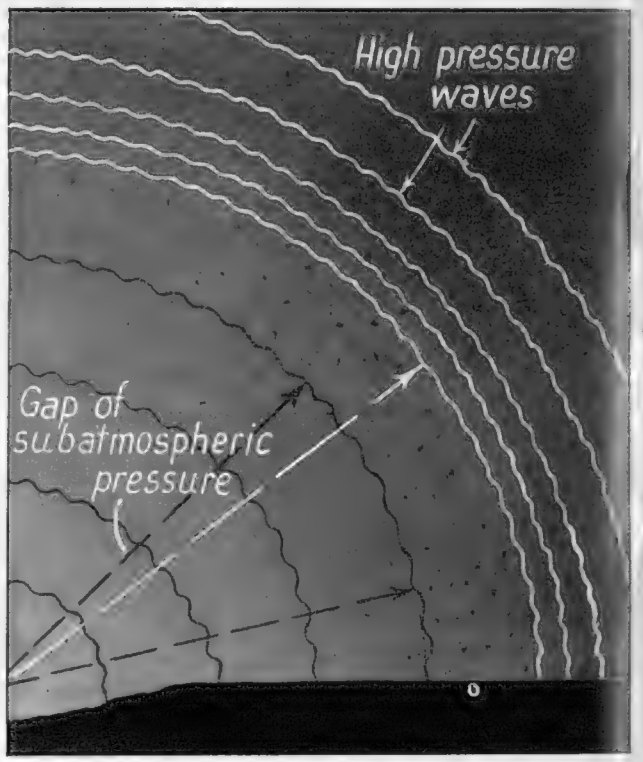
The great carrying capacity of the Stirlings and Lancasters of the R.A.F. has enabled these big four-engined aircraft to carry their 3½-ton and 1¾-ton bombs to the very heart of the enemy's war industries.

Some of the large British bombs are shown in the big drawing on the right-hand page, together with the gain per second in velocity of a falling projectile. The figure after the name of the aircraft indicates the number of the bombs each type carries—but, of course, they are interchangeable.

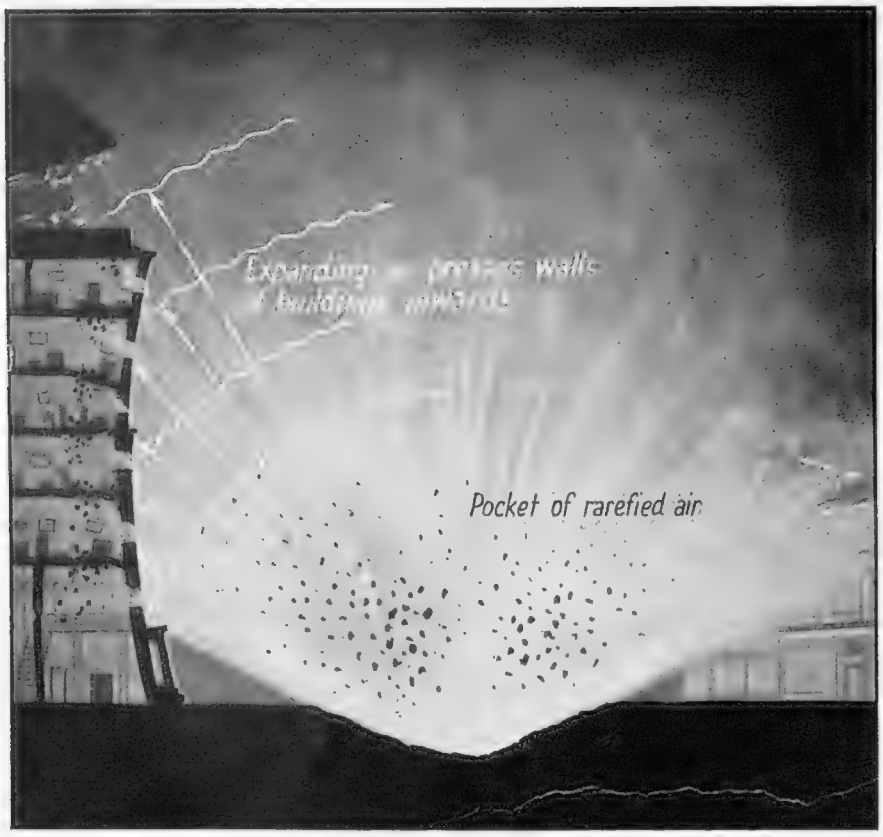
Inset in the bottom right of the large drawing is a summary of the most important question of all for a bomber—that of distance versus bomb-load. Owing to the huge quantity of fuel consumed by four powerful motors, when a long flight is made the bomb-load must be reduced accordingly, to allow of the terrific weight of petrol carried. The figures given in this inset drawing are only intended to illustrate this point, and are not actual figures.



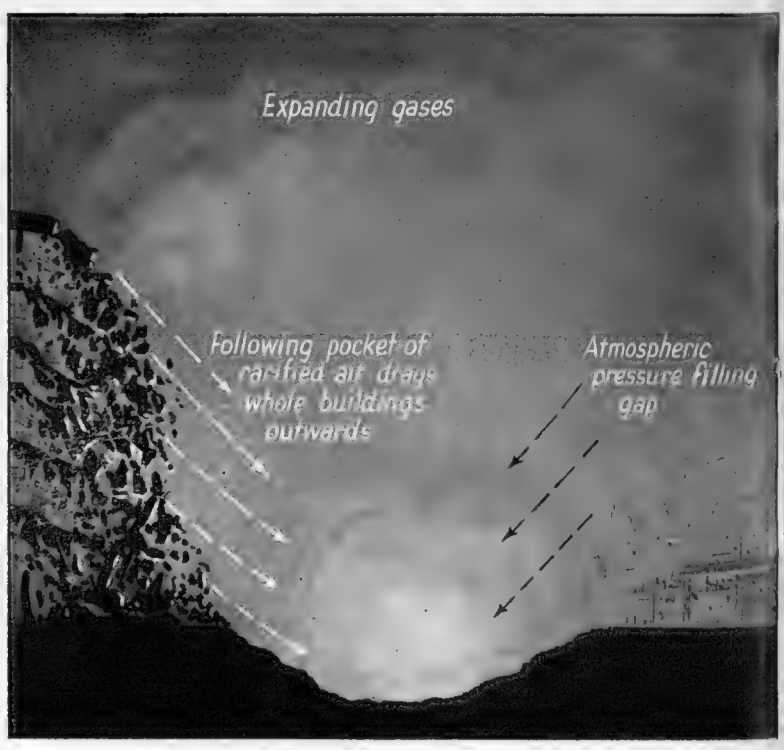
2. The "waves of pressure" impart a shock to the surrounding atmosphere and then move rapidly away



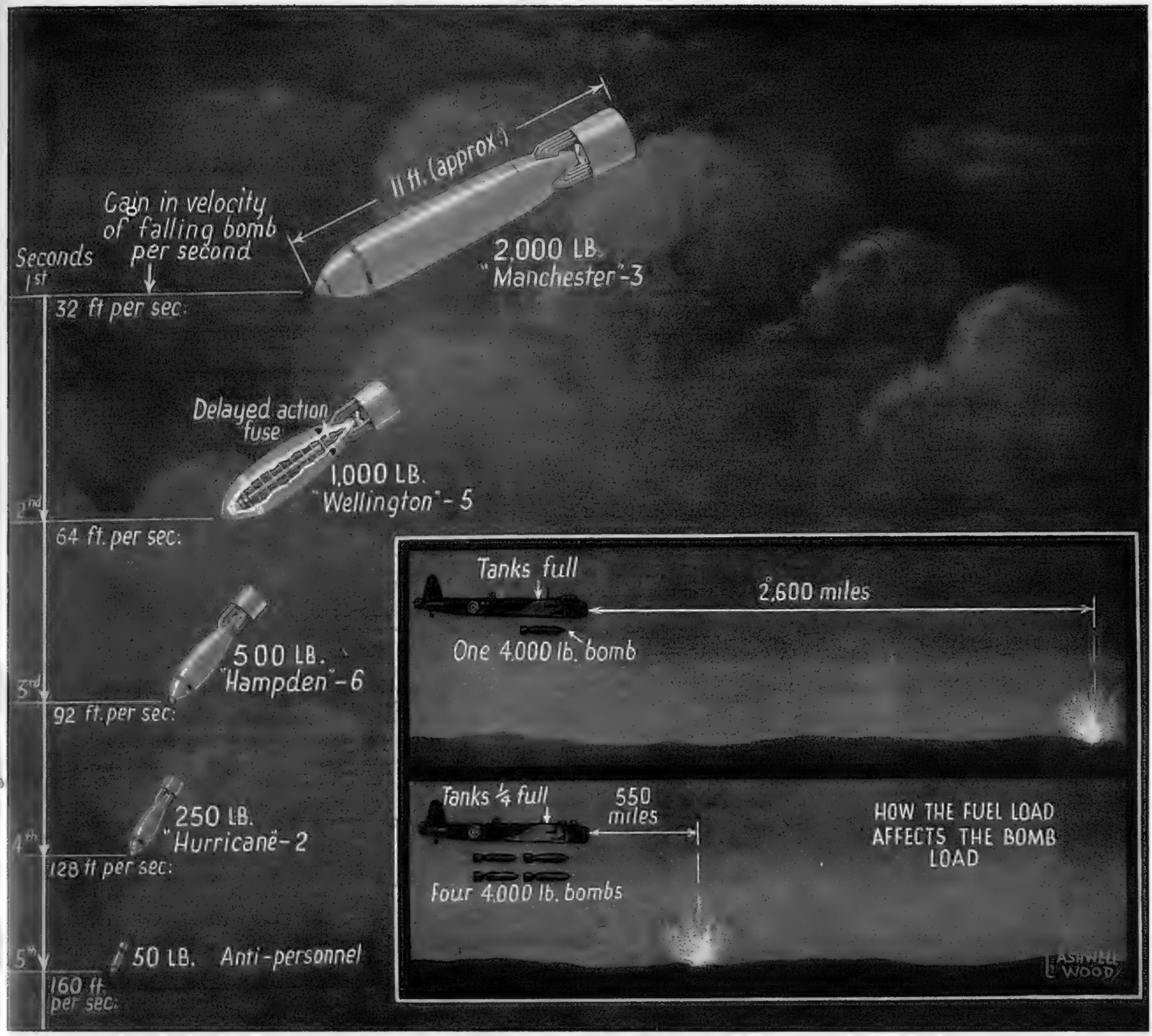
3. Behind the rapidly-expanding pressure waves comes a trough, or gap, of sub-atmospheric waves—i.e., suction. The two combined constitute the "Blast Wave"



4. *Above*—The expanding waves and gases set the surrounding air into violent motion: with our own big bombs, these will affect buildings hundreds of feet away, causing the walls to be pressed inwards



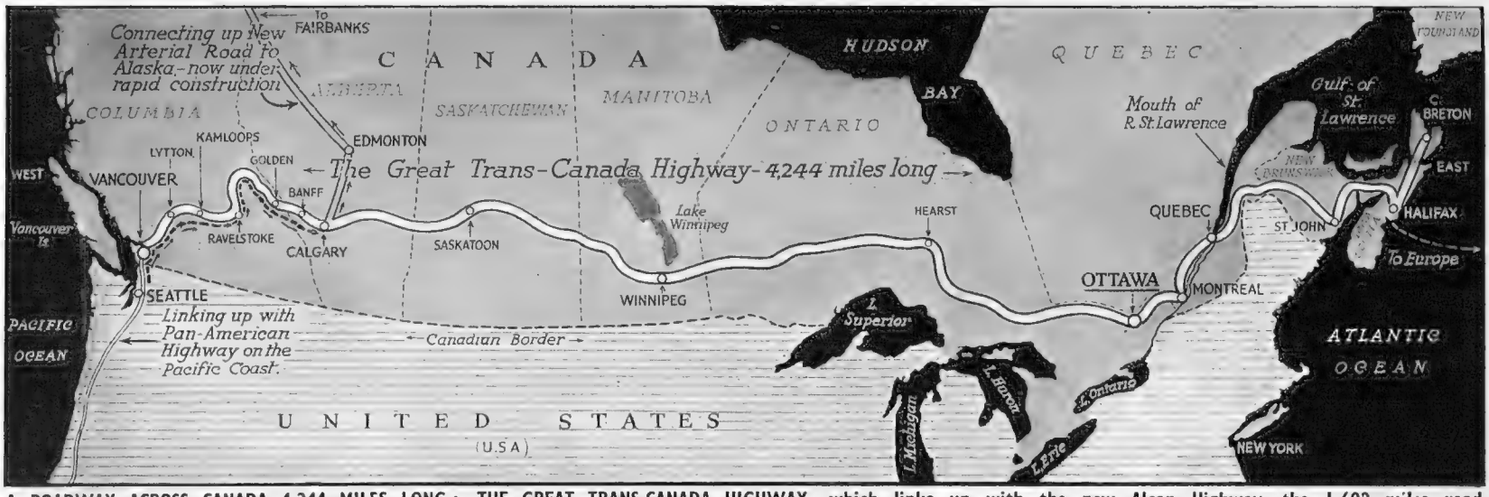
5. *On right*—The following pocket of rarefied, or sub-atmospheric, air now pulls out the whole sides of buildings as if an explosion had occurred inside. After this, atmospheric air again fills the gap. The Germans call these big bombs "Block Bombs," because they bring down whole blocks of buildings



THE PROGRESS IN OUR BOMB DEVELOPMENT: From the small "anti-personnel" bomb, weighing but 50 lb., up to the 2,000-lb. bomb which (with others even bigger) have been dropped on Germany during recent raids. This diagram also shows the speed at which bombs drop, and also how the bomb-load is affected by the distance which the aircraft has to travel to reach its objective (see notes on facing page)

A NEW 2,000-POUNDER BOMB being fitted into the racks of a twin-engined Manchester during preparations for an assault on Germany

AN AMERICAN-MADE 1,000-POUNDER being "finned" and primed, for loading into a Liberator bomber at the U.S. Bomber Station in England



A ROADWAY ACROSS CANADA 4,244 MILES LONG: THE GREAT TRANS-CANADA HIGHWAY, which links up with the new Alcan Highway—the 1,600 miles road through Alaska to Fairbanks. Hitherto, it had been impossible to motor from the east of Canada through to the west, as one State had not completed its section: now the whole route is complete—and also the extension up to Alaska

The trans-Canada Highway starts at Halifax, in Nova Scotia: it crosses the Isthmus to New Brunswick and the city of St. John. It then passes through French Canadian towns and villages. In the province of Quebec, and on to Montreal. By way of the Laurentian Hills, the Highway passes to the Canadian capital at Ottawa; then, skirting shimmering lakes, rushing rivers and vast forests, it penetrates the wheat-lands of Manitoba and Saskatchewan. At Calgary, in Alberta, the road begins to rise as it approaches the Canadian Rockies, reaching a height of 4,000 ft. between Banff and Lake Louise. Through a region of spectacular scenery the road traverses the famous Big Bend Highway and the Fraser canyon to reach its terminal at Vancouver. At Calgary, junction is made with the Alaskan Highway to the north; and at Seattle the Pan-American Highway on the Pacific Coast is joined

The TRANS-CANADA and ALASKAN HIGHWAYS

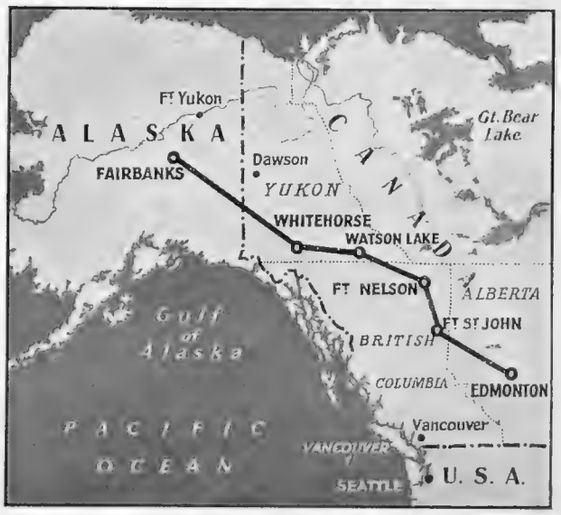
The Construction of which are Strategic Achievements of the First Importance. *Described by* EWING GRIFFITHS

EARLY in December the 1,600-mile Alaskan Highway, now known as the Alcan Highway, will open for traffic. Its northern terminal, Fairbanks, is within easy flying distance of Russian territory, across the other side of the Bering Straits (which are normally frozen sufficiently solid to bear traffic in mid-winter), so there is no need to underline the strategic value of the road.

Less well known, but no less important, is the 4,200-mile trans-Canada Highway, linking Halifax (Nova Scotia) with Vancouver, in British Columbia, and hence giving Eastern Canada a direct through route to the Alcan Highway. The last section of the trans-Canada route—a 125-mile gap between Hearst and Geraldtown, Ontario—was completed a few weeks ago. Until this was done, it was impossible to cross Canada from east to west by motor-car—drivers had to enter United States territory from the Ontario border and travel west for nearly 300 miles on American territory, before being able to rejoin Canadian soil. This gap has now been bridged by a well-graded gravel-surface highway, quite capable of carrying heavy industrial traffic. Due to the dryness of the Canadian winter and the hard-packing nature of the snow, it should remain in service right through the winter, though some sections may become unusable for a brief period in the spring thaw.

Along its 4,200-mile length, the trans-Canada Highway passes through eight provinces—Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia—whose Governments have been responsible for the construction of the road with the aid of a 40,000,000-dollar grant from the Dominion Government. The work has been proceeding since 1919, and naturally the earlier portions of the road are now really excellent concrete highways, carefully engineered, passable in all weathers, and in some cases with modern "fly-over" crossings for intersecting roads. Over half the total mileage is in concrete, asphalt or bitumen, and the rest is at least graded and waterbound.

Great ingenuity has been shown in using local materials to save time. Frequently, for example, the route lay through virgin timber, and the trees cut to give the right-of-way were converted in portable lumber-mills on the spot for use in the construction of bridges and culverts. Eventually all bridges will be in concrete, but timber construction has been permitted with a view to getting the road in service as an express highway at the earliest possible moment.



THE NEW ALASKAN HIGHWAY, which runs from Edmonton to Fairbanks, a distance of 1,600 miles. This wonderful engineering achievement will open for traffic early next month

The Alaskan Highway proper starts on American territory at Seattle, the important Pacific Coast port. Good existing roads on the British Columbian side of the border carry the road to Vancouver, and thence along the trans-Canada Highway to Calgary (or, rather, highways, for there are two good routes from Vancouver to Calgary), and so northwards through Edmonton to Dawson Creek. It is at Dawson Creek that the new 1,600-mile section of the Alaskan Highway starts, running through the wildest conceivable country, via Fort St. John, Fort Nelson, Watson Lake, Whitehorse Skagway (names familiar in the gold rush of '49) to Fairbanks, in Alaska.

Work on it commenced in March 1942, when the agreement was signed between the Canadian and U.S. Governments. It is not the most direct route possible, but it has the advantage of lying for the most part on the eastern side of the Rockies, and is thus sheltered from aerial attack or sea-borne Commando raids. The work of building was undertaken by the U.S. Army engineers under Major-General Eugene Raybold. No fewer than eight aerodromes have been built along the road, and, indeed, very extensive use of aerial transport has been made throughout, for ferrying everything needed.

Every conceivable natural difficulty was encountered—temperatures ranged from as low as 35 deg. below Zero to 90 deg. in the shade, when gloves and nets were worn as a protection against clouds of mosquitoes and flies. First planned as a rough pioneer road, the Highway has now been completed for much of its 1,600-mile length as a well-graded, well-drained highway, which, on many sections, will accommodate two-way traffic. Nearly half the length of the road has been metalled, but before December that operation will be completed, ready for handing over the Highway to the Public Roads Administration of the United States. While it may be impassable during the April thaw, it will enable supplies to be sent by road for four months to the highly important airfields in the interior of Alaska, which so far have been almost entirely dependent on supplies sent by air. The value of the Alcan Highway will be increased in 1943, when it is expected that it will be extended to the shores of Bering Straits. As Alaska is only about 100 miles from Siberia, the Highway may be the first step towards land bases for Russia and attacking Japan. It will obviously relieve the west coast sea route recently threatened by the Japanese attack on the Aleutian Islands.

THE FIRST AIR VIEW OF THE ALCAN HIGHWAY INTO ALASKA: This picture shows a section which skirts one of the many lakes along the route: a branch road (in the left of the picture) leads to an old Indian settlement by the lakeside. The 1,600-mile Highway is due for completion on December 1, less than ten months after it was started and many months ahead of schedule. It runs from the railhead at Edmonton, in Alberta, to Fairbanks, in Alaska

GERMAN AND RUSSIAN TANKS FIGHT AN ARTILLERY DUEL BY NIGHT: The tracer ammunition reveals the flight of the shells and shows how the rapid fire at first ricochets until the vulnerable points on the target have been found, when the heavier guns then come into action

Night engagements between tanks have been rare events during the progress of the present war, although such clashes between the armoured forces have occurred in both Egypt and in Russia. It is no easy matter to estimate the enemy's strength correctly in the darkness or to make out the moving targets clearly. Tracer bullets are used widely during night duels, as they help to locate the position of approaching tanks. The picture above, and that on the left, come from Russia; the two pictures below from the present scene of fighting in the Egyptian Desert since the opening of the offensive by the Eighth Army

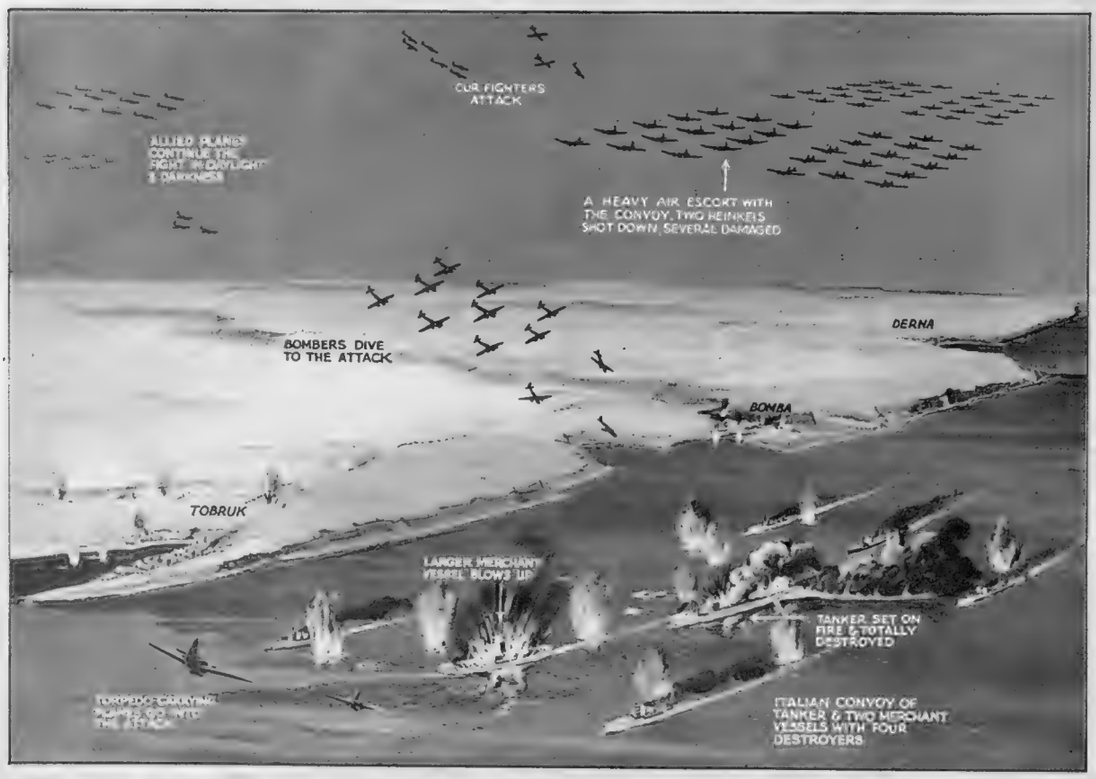
NIGHT EFFECTS on the BATTLEFIELD

THE SCENE OF FIGHTING IS LIT WITH TRACER BULLETS: These seem to have been projected upwards: they are vivid enough to illuminate trees in the background and to outline the tanks themselves

FEEDING THE GUNS IN EGYPT AT NIGHT: A radio picture showing ammunition boxes, transports and men carrying up more shells, silhouetted against the flashes from the big British guns bombarding Rommel's desert positions at the opening of the Eighth Army's big drive

A SCENE FROM THE DESERT OFFENSIVE: Axis raiders are attacking an Allied forward position newly won in the first advance in Egypt. This night study shows "flak" from the British ground defences being hurled at the enemy aircraft

THE GOOD WORK OF THE ROYAL NAVY IN THE MEDITERRANEAN IN SUPPORT OF THE LAND OPERATIONS OF THE EIGHTH ARMY IN EGYPT. Hitting at enemy supply ships bound for North Africa off the Sardinian coast: a British submarine torpedoes an Italian destroyer and an armed merchant cruiser whilst they were convoying supplies for Rommel's forces (see *notes at right*)—*Drawing by Montague Dawson*



CUTTING OFF ROMMEL'S VITAL OIL SUPPLIES: A tanker is set on fire and a large merchant vessel is blown up during an attack on a heavily guarded convoy from Derna to Tobruk—*Drawing by E. G. Lambert*

Rommel's alarm at the havoc created along his supply lines by the Allied Air Forces has been reflected in the unprecedented escort he has provided for some of his supply convoys between Derna and Tobruk. The two cargo-boats and tanker seen above were themselves heavily armed; four destroyers were with them, and they were covered by a huge air umbrella. Our long-range fighters spotted the midget armada, and signalled the good news back to British Headquarters. Within minutes, light bombers, medium bombers, torpedo-carrying naval planes, and more long-range fighters were in the air on their way to the spot. They swooped in under the *Luftwaffe* umbrella to the attack. The bigger cargo-boat blew up with a terrific roar (it had been packed full of ammunition), and the tanker was soon blazing furiously, and it became a total loss before sundown. Two Heinkels in the air umbrella tried to interfere; they were sent crashing down in flames before the Allied aircraft withdrew, well content with their handiwork

***On right*—BOW-WAVES ON WAR VESSELS: How they are formed and what they indicate**

Drawings by Wm. McDowell

The shape of the bow-wave of any ship depends on the fore-end of the hull, and the speed of the vessel. Every different type of vessel has its own characteristic wave, the true shape of which can only be realised when the ship is travelling in smooth water. To a submarine commander the bow-wave is important—from it he must deduce the size of the ship he is encountering, and, roughly, its speed. In the series of drawings reproduced here, the two at the top show front and side views of the bow-wave of a modern destroyer at full speed: *A* indicates the "feather" or false wave made by the impact of the stem; and *B* shows the true bow-wave caused by the wedge-shaped bows parting the water. In the centre, a cruiser is shown at speed in a slightly choppy sea. *A* is the bow-wave and "feather" combined; *B* is the "secondary" wave which only occurs in fast vessels of a length of about 500 ft. and upwards; it is formed by the full width of the ship overtaking the bow-wave made by the narrow bows, and striking it before it has time to subside; *C* is the stern wave: the disturbance made by the propellers is forced to the surface by the pressure of water parted by the ship and meeting behind her. In the lower left is an aerial view of a large ship: it shows how the stern- and bow-waves combine to make a series of V-shaped waves behind the ship. The drawing in the lower right shows a full, or bluff-bowed vessel, such as a merchant ship: this makes a bow-wave of entirely different shape to that of a fine-lined fast vessel. Such a ship actually pushes a small hillock of water in front of her instead of parting it cleanly, as does the destroyer type. *A* indicates the hillock; and *B* the bow-wave

CUTTING the AXIS LINES to EGYPT

The British Submarines at Work Off the Italian Coast

Really fine work in preventing supplies from reaching Rommel in North Africa has recently been accomplished by British submarines operating over a wide stretch of the Mediterranean. The number of supply vessels sent to the bottom is already a large one; and the work is still continuing! Some little time ago, the Admiralty issued a summary of recent scores against the enemy.

H.M. submarines operating in the Mediterranean, the statement indicated, have scored further successes on the supply lines to the Axis armies in Libya. Five Italian supply ships have been sunk, one destroyer and an armed merchant cruiser probably sunk, while five other enemy supply ships have been damaged.

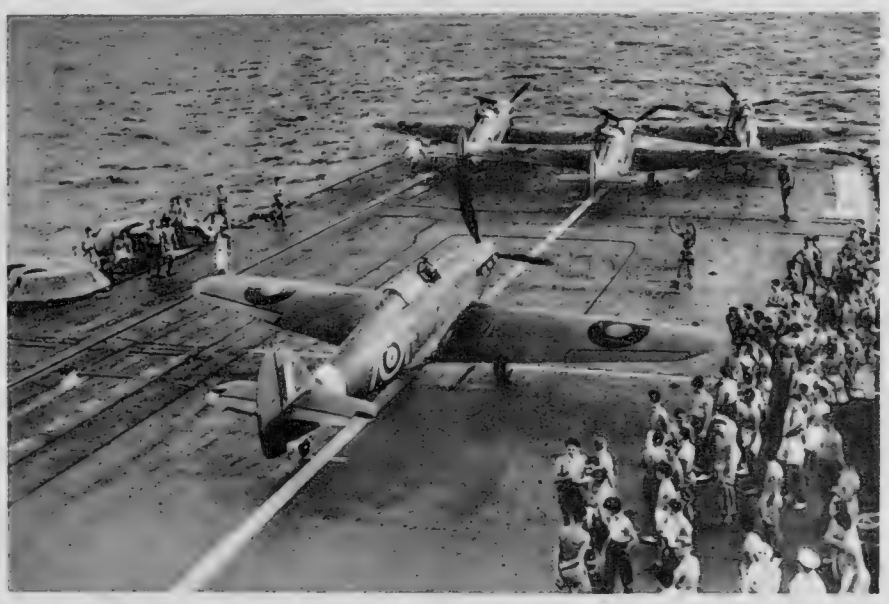
Four submarines share in the success of these latest operations. They are commanded by: Commander B. Bryant, D.S.C., R.N.; Lieut. E. T. Stanley, D.S.C., R.N.; Lieut. A. C. G. Mars, R.N.; and Lieut. J. W. D. Coombe, R.N.

Among the ships destroyed was a medium-sized petrol carrier, and a vessel heavily laden with motor transport, which had previously been damaged and stopped by air attack. The other three supply ships sunk were carrying foodstuffs and stores. The destroyer which formed part of the escort of a convoy was torpedoed at the same time as one of the supply vessels in the convoy, and was probably sunk. In the case of the other four enemy supply vessels hit with torpedo, it was not possible to observe the final result. The armed merchant cruiser formed part of a convoy escort off the coast of Sardinia, and either sank in shallow water or was beached.

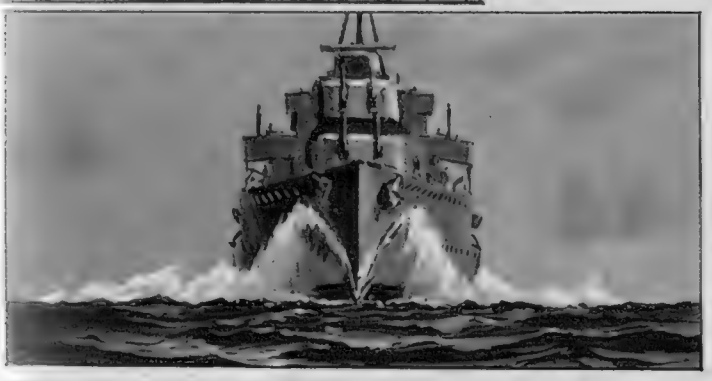
This brings the total number of Axis supply ships sunk or damaged by H.M. submarines in the Mediterranean during October to twenty-four. Of these, fourteen were seen to sink.

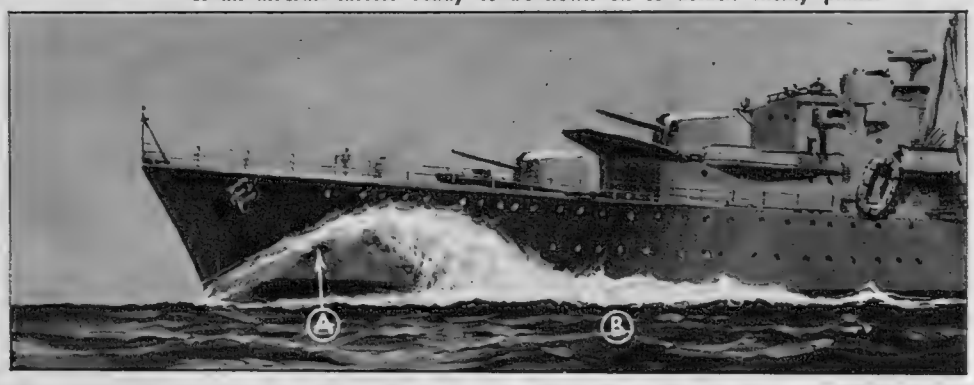
Commenting on this fine work, a naval expert has added the following comment: "Our submarines, by tireless work and determination in the face of the most dangerous and difficult conditions, have levied a heavy toll on the enemy's reinforcements and supplies at sea. During the first three and a-half weeks of October these craft have sunk or damaged twenty-four Axis transports and supply ships.

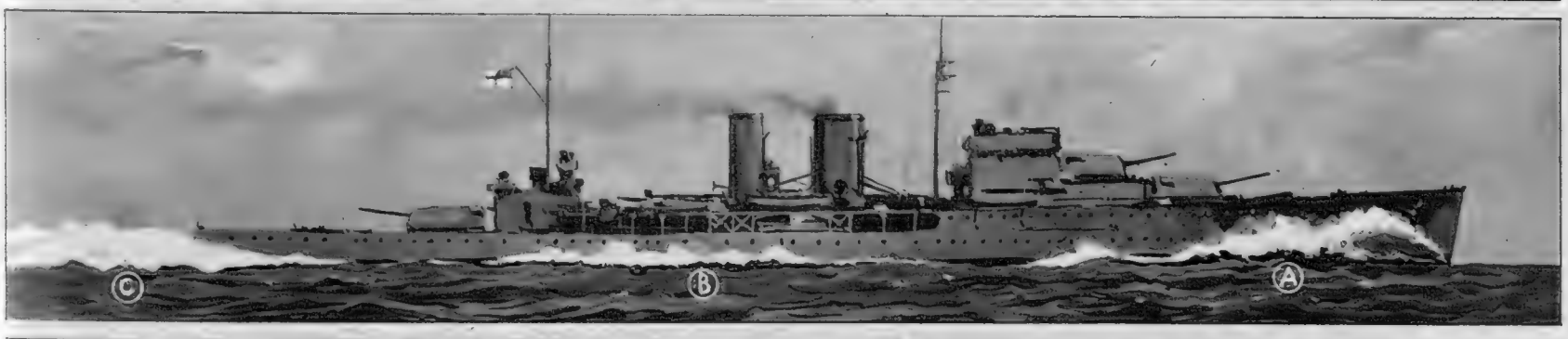
"The Admiralty, with proper reluctance to make a claim unless it is fully substantiated, pointed out that only fourteen of these ships were actually seen to sink. It is probable that a proportion of the other ten ships did not sink, but in any event none of them could have continued with their task of ferrying supplies to Rommel's armies"

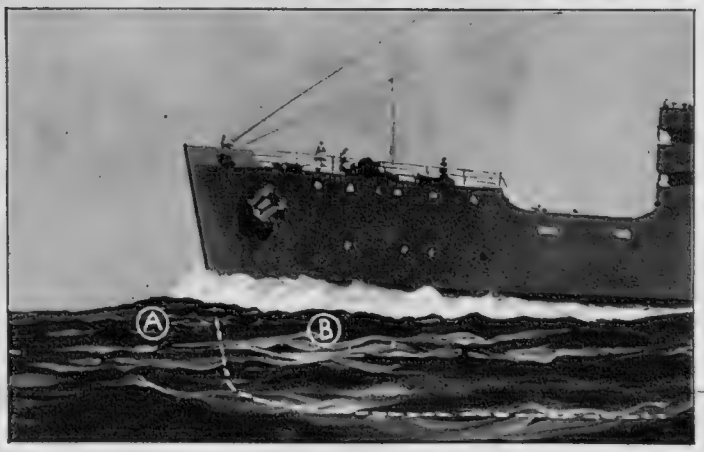


FOR THE PROTECTION OF OUR OWN CONVOYS AT SEA: "Sea Hurricanes" on the deck of an aircraft-carrier ready to be flown off to attack enemy planes









AMERICAN INDUSTRY BECOMES GEARED UP

What is Going On in the Vast Industrial Centres of the United States To-day

Described by CHARLES GRAVES

THE United States has always enjoyed a reputation for mass production, but from the latest information received in London it would appear that if Hitler, Göring and Goebbels were taken on a conducted tour of the war factories over there they might, in all seriousness, throw in their hand. Compared with 1917, American industry was immeasurably vaster and better organised in 1939. Otherwise it would have been impossible for the gigantic Chrysler tank arsenal to be producing Army tanks within relatively few weeks after the site had been a cornfield. It must also be remembered that there is no real black-out in the United States. Workers, therefore, are less hampered than those of Great Britain and the Continent.

MIDNIGHT IN AN OREGON SHIPYARD: Work goes on at full speed under the blaze of great arc-lamps, which turn night into day. Three ships had already been launched from this shipyard on the day when the above photograph was taken

Mr. Malcolm Muir, President and publisher of *News Week*, and Chairman of the War Committee of the National Association of the Manufacturers of the United States, has just arrived in this country and has given me a vivid picture of what is going on. At the same time, he says that the "damnedest hush-hush" is concealing the gigantic accomplishment of aircraft factories and the mammoth jobs going on all over the country.

The targets nominated by President Roosevelt in January of this year were as follows:—

	1942	1943
Aeroplanes - -	60,000	125,000
Tanks - - -	45,000	75,000
Anti-aircraft guns -	20,000	35,000
Merchant shipping -	8,000,000 dead-weight tons (since raised to 9,000,000 dead-weight tons).	10,000,000 dead-weight tons (since raised to 15-16,000,000 dead-weight tons).

By May, the industry was producing over 4,000 aircraft a month, and the climb has been geometrical since then. What is more, a new aeroplane factory will be in full production on December 1 from which the latest type of Flying Fortress will be coming off the stocks by the hundred. These can carry a load three times that of the present Flying Fortress (though admittedly this is not much), and will have a greatly-increased range. "The baby to bomb Tokyo" is what they are calling it.

The Kaiser yards have had some publicity over here. But it is worth repeating that these 10,000-ton Liberty Ships are being made at the rate of one every ten days, and shortly will be coming out at the rate of one every seven days. It is, of course, an assembly job on an endless conveyer system extending thousands of miles inland. Sheer lack of space would make it impossible in this country; but one must give full marks to an assembly job which enables the new ship to blow her own steam whistle under her own power as she actually goes down the slipways!

After each Liberty Ship is launched she goes to a couple of outfitting docks. At the first the guns and furnishings are installed. At the second the food, linen and other internal requirements are put on board. In the meantime, crews are being mass produced. At Chicago, for example, 80,000 men are being turned into sailors every six weeks. They are divided into units, each unit having its own armoury. They are trained as crews just as air crews are put together for bombers, though in this case they only go up to the rank of petty officer.

In New York there is a training-school for the mass production of midshipmen. The course is three months long, and whole classes of undergraduates from Yale, Harvard and Princeton have already passed through. In this way it is only necessary to produce officers for the ready-made crew of each ready-made ship. Incidentally, the Stevens Hotel in Chicago (the biggest hotel in the world) has been commandeered for the training of radio electricians and other technicians. Equally, every hotel in Miami (according to Mr. Muir) has been requisitioned for training ground crews for the American Army Air Force.

"The whole character of life in the United States has changed since Pearl Harbour," said Mr. Muir. "The shock was so terrific that within four months of our entering the war we have produced a greater output of munitions of war than we did in the whole of the last war—that is, from April 17,1917 to November 11, 1918. Almost every day our sights have been raised to a higher notch, with the object of having an armed force of 10,000,000. As further proof of the complete change in the character of life in the United States, I can say that New York is a city of depression, with 400,000 unemployed. For New York's industries were primarily the women's garment trade, tourist traffic, luxury travel and printing. The other day Kaiser came across from the Pacific coast, leased halls for recruiting workers, and sent 25,000 by train right across the continent to Portland, Oregon. Portland is a fantastic city. You cannot get anyone to drive taxicabs or work the elevators. Everyone is in the shipyards. The local newspapers are full of advertisements of new employees, not for houses, apartments or a room, but just for individual beds or sofas. They know that they can get nothing else.

Women are being used more and more in industry. The aircraft factories led the way, and it has now been found that in many jobs, particularly the assembling and wiring, they are actually more efficient than men. In certain processes, eight women are doing the work of fifteen men previously. This has been found in England as well, of course, but in America the women are receiving wages equal to the men—that is to say, they are receiving equal pay for equal work. Nearly all of them wear slacks.

In view of the decree whereby nobody in America can have more than £6,250 free of income-tax, the only so-called "profiteers" are the working classes. Mr. Muir was telling me how the road to Jones Beach on Long Island swarms with high-powered motor-cars owned by negroes and workmen in shirt sleeves, who are earning huge wages and spending them.

I asked him about the production of synthetic rubber in the United States. The goal is 800,000 tons a year, but this will not be reached before 1944. The worst time for rubber will be from autumn of next year to spring of 1944. Incidentally, it is thought that synthetic rubber will be produced in such quantities that the price will come down to 8 or 10 cents a pound, and that even when Japan is beaten and the British and Dutch rubber plantations are recovered, American industry will no longer need the raw product and will have its own independent and adequate supplies of synthetic rubber.

The armed forces have now reached 4,500,000. As for the American Navy, the United States have 3,220 combat, auxiliary, patrol and mine vessels under construction compared with under 700 last year. These figures do not include 11,000 smaller ships being built. Other heartening facts are that 75 per cent. of American steel production is going to war uses, and that the total steel capacity in the United States is now 50 per cent. more than the total capacity in all Axis and Axis-occupied countries. It is actually employing 659,000 people.

IN THE LOCKHEED AIRCRAFT PLANT AT BURBANK, IN CALIFORNIA, where the Hudson bombers of the R.A.F. are built. These works have been expanded at a terrific rate, developments having begun long before the entry of the U.S. into the war

I referred to women in war industries just now. There are now 43,000,000 of them employed in this way, and by the end of next year their numbers will reach 60,000,000.

Statistics, after a time, become dazing. The fact remains that the United States is now spending over £1,000,000,000 a month on the war, and one can only reiterate with General Smuts the enormous importance of the attack of Pearl Harbour. Americans are a proud race, and the insult to their self-esteem has had a tonic effect on their whole war outlook which nothing else could possibly have produced. Pearl Harbour created the decisive psychological factor which will win the war for the United Nations. And it is the irony of fate that it will be Kaiser who will have had as much to do with defeating Hitler as any other single American, except the President himself.

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this publication should not be taken as an indication that they are necessarily available for export

A MASS OF WRECKED BUILDINGS FROM WHICH CLOUDS OF SMOKE RISE CEASELESSLY : A view of Stalingrad to-day, after three months of incessant artillery and aerial bombardments which have reduced whole areas to mere masses of smoking rubble

WHERE THE GERMANS ADVANCED INTO STALINGRAD ALONG THE RAILWAY LINE : The buildings which still stand in this area are merely burnt-out shells. A damaged German tank may be seen immobilised under cover of a wall on the left

THIS IS THE RUSSIAN TOWN OF VORONEZH, part of which is now in ruins. It was at this spot that the Red Army counter-attacked after the assault on Stalingrad had been begun by the Germans

STALINGRAD and VORONEZH in RUINS : How the Two Cities Look To-day After Months of Bitter Fighting

Pictures just received from a neutral source

For three months now, the armed might of the German Army has been hurled against the city on the Volga—in vain, despite Hitler's reiterated promises to the German people. But little of the city now remains. Under the pounding of heavy artillery and under constant air bombardment the great Industrial City has been pounded into rubble. At Voronezh, too, the city has suffered; but, of course, not to the extent of Stalingrad. It was here that the Red Army, reeling under the enemy's blows on the Volga, retaliated by launching a counter offensive which met with success during those momentous days when the whole world watched with awe the battering of Stalingrad

AWAY FROM THESE WARS. . . .

Memories and Thoughts of the Years Between

—A Fortnightly Causerie By J. G.

TOM FOOL.—If I had been a gentleman, I should have discovered myself to Mrs. Bellasis and her companion, Mr. Huckaback's newly-married daughter. But the circumstances were so unusual, the opportunity so irresistible, that I had no mind to rise to such heights. I remained rooted to the spot on one side of a thick holly hedge while these ladies on the other, blissfully ignorant of my presence, discussed my unworthy self. The occasion was our local point-to-point. The hedge ran diagonally down the narrow field of vision of the last fence. The wind blew across the hedge and the ladies were on the windy side. The opportunity rarely comes to a man to hear himself discussed; the circumstances are unique when he is furnished with intimate details of his career and a frank estimate of his character by two persons to whom he has never spoken. I have lived in this neighbourhood little more than a year. Mrs. Bellasis I had once seen; and Mrs. Bellasis once seen is never forgotten. Huckaback's daughter disclosed her identity during the conversation. Yet both these ladies were familiar with many details of my life which I had forgotten, and did indeed between them build up a full-length portrait of me which, because it was not entirely unpleasant, is, I hope, a recognisable portrait. Why should I conceal the absurd truth? I was more than stimulated, I was uplifted. For the first time in my life (as it seemed) I had proof of my existence. I knew myself at last to be an entity in the crowd, a distinct unit capable of impressing his individuality on his fellows. I was I. There are more people know Tom Fool than Tom Fool knows. It is a heartening proverb which every diffident man should display on his looking-glass.

Jumbles.—The inhabitants of our village (and, I believe, of every village) eke out a precarious existence by taking in each other's cast-offs. The financing of very many village institutions is comprised in the one word "jumble." The Village Hall is losing its roof—a jumble. The Guides must replenish the District Fund—a jumble. The District Nurse asks for more—a jumble. The Scouts, the Women's Institute, the local Whatnots—jumbles are the first and last resort, the panacea, the mend-all.

The jumble never faileth. It blossoms in the dust of yesterday's jumble. To-morrow and to-morrow and to-morrow there will be jumbles, and the village dames are all agog. There is always a handsome profit assured after writing off a generous percentage for larcenies. And that thought consoles me when I see my best pair of London trousers walking precariously up the aisle at early service covering the gnarled shanks of old Hodges. My loss is the village's gain, one way or another.

The Literature of Youth.—The literature of youth to-day does not, after all, reveal the amazing revolution of which we love to boast.

The Byronic young man was just as disillusioned, as cynical, as contemptuous of the established order of things, as determined to administer jolts and shocks to his elders.

The revolution is not so much apparent in the new literature of youth as in its critics. After Waterloo, middle-age still held its head high and castigated schoolboys or laughed them out of court in the time-honoured way. But to-day, age has been condemned and has come to acquiesce in the verdict, and the cynical juvenilia of youth is accorded the fulsome adulation which is due to mature genius.

Opinion in the City.—I have paid a high price for three grains of wisdom which few mortals who invest their savings ever accept as a free gift.

1. At the end of his life the shrewdest and luckiest speculator will be no better off than if he had invested methodically in gilt-edged securities. He will probably be worse off.
2. If you want an opinion on the soundness or prospects of an industrial company, you cannot do worse than ask the chairman of the company.
3. A sensible "man in the street" is just as likely to be right on a question of investment as his stockbroker.

The history of the rubber share market in the last twenty years is sufficient proof of my contentions.

Miss Donkin.—Miss Donkin's first and last week-end visit here is over. That executive and iron virgin returned this morning to her multifarious committees in London.

Given time and rest, we expect to recover our self-esteem and to recharge our accumulators. Is there in social converse anything worse than an enforced t'te-à-t.te with a vain and empty-headed girl whose physical charms do not happen to attract one? Socially energetic men have admitted to me (and Miss Donkin has convinced me) that Society keeps in its locker one shot even more deadly—a long tête-à-tête with a vigorous woman of undoubted ability who has a reputation for brilliance to maintain. It is hard to die of paralysis. It is a worse punishment to be slowly clubbed to death.

No Grounds for Anxiety.—To-day, no woman need feel diffident about her intelligence or ability who can make a home comfortable, train and keep efficient servants, bring up her children to be unobjectionable members of society, and withal keep on the right side of an inelastic income. Is there a severer test of supreme ability? Yet you will sometimes find that women who have passed this gruelling test confess a certain diffidence.

Democracy.—Mr. Huckaback apologised for worrying me, but urged that it was the plain duty of the gentry in the parish to devote a little time to voluntary service of some sort.

To bring my courage to the sticking-point, he started a new line of argument. "You see," he confided, "they like to be bossed by a gentleman. They don't trust one another." Upon my word, democracy is as one-sided an arrangement as was oligarchy in the bad old days, and much more illogical to boot.

Of Hens and Parish Councillors.—Until I had to do with hens, I had no conception of the depths of obstinate stupidity to which God's creatures can sink. There are moments now—wild moments—when I can almost comprehend the state of mind of a yokel convicted of gross cruelty to a fowl. I believe that persons of nimble mind, who (for one reason or another) sit on village committees or engage in parish politics, are similarly afflicted with a sudden lust for slaughter. They are with difficulty restrained from releasing their pent feelings in a piercing scream and bludgeoning with some blunt instrument the smug faces round the table.

Shopping.—London is a great shopping centre—but you will not succeed in buying a bone collar stud there.

In country towns they stock everything—except what you want—and not content with this, they seek to prove that in demanding the one article they do not stock, you reveal a lack of taste and an ignorance of current fashion surprising in a person of exalted rank and superior attainments. No, sir, they say, we have no bananas as it happens. Bananas are not being eaten this year. People are going in for apples. These Ribstons now. . . .

Success.—Experience of earning a living by writing soon taught me one valuable lesson. Unless one regards life as an enthralling comedy and observes with constant and vigorous interest the behaviour and reactions of those around him, he will never succeed in writing a novel worth the name or the trouble.

I have never so regarded life nor maintained for more than brief intervals an interest in the reactions of my neighbours to their particular circumstances.

I have been far too preoccupied with my own lonely and uncharted course in an illimitable ocean, and very wisely I have wasted little time on fiction. But experience of life convinces me that what is true of the writer is true also of the stockbroker or the politician or the financier. To succeed in any walk of life one must for ever be playing the lead in a drama of his own creation. I am constantly struck, when I meet successful men, by their undiminished zest for the plays of childhood. They are still playing shop, still enthralled by King of the Castle.

The Victorians.—If we continue at the present rate in our debunking of the Victorians, we shall come within a decade to esteem them for no virtues at all but strong constitutions and a (newly discovered) taste in house-furnishing.

A PARATROOP INVASION OF A BRITISH VILLAGE shown in the new film at the London Pavilion: Commander Ortler (Basil Sydney), disguised in British uniform as an officer of the Royal Engineers, compels the villagers to remain in the church while his men are conducting operations on the roads surrounding the village. The vicar (C. V. France) defies the Commander and, before his intention is observed, starts to toll the church bell. He is shot while holding the bell-rope

PLOTTING TO BREAK OUT OF THE CHURCH and carry news to the neighbouring villages: Held prisoners in the village church, some leading spirits try to devise a means of getting news of the invasion to the nearest Home Guard centre. Tom Sturry (Frank Lawton), a young sailor home on leave, suggests a way

The latest British war film deals with the story of the arrival in an English village of a force of sixty Germans, disguised as Royal Engineers, who have come to survey the place with regard to its military defence. The men are billeted on the villagers, and at the vicarage and the manor-house. The commanding officer is received courteously and the men are made welcome in cheery fashion. But an air of tenseness gradually develops as the mask wears off. The resulting reactions of the village, when it learns that it has been deceived, gain in force and veracity owing to the simple directness of the production. Everything about the village and its inhabitants is true to life in the film. The setting is thoroughly English. The vicar early falls a victim to the terror methods of the paratroops. His first effort to warn the outer world is followed by others. A little boy evacuee, who has learnt wood lore from a local poacher, succeeds in getting news through to the outer world. The local Home Guard, returning to the village, are shot down as they cross the invaders' cordon. The final defence of the manor-house, where some of the villagers put up a determined resistance, is shown with great spirit

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Five minutes before this was written, an eager youth wanted to join the *Arethusa*. He was 16—too old—and said he had tried the Navy in vain. As he passed out of the door, tears stood in his eyes. There is a long waiting list of those the right age, but lack of funds prevents extension. Will you help and send a gift to 164, Shaftesbury Avenue, W.C.2?

PEOPLE in the PUBLIC EYE

THE DUCHESS OF KENT REAPPEARS IN PUBLIC: For the first time since the death of the Duke, she appeared in public when she visited a W.R.N.S. Training Centre in the London area. Here she is passing through a guard of honour composed of trainees who have only been in the Service for two weeks

WIFE OF THE C.-IN-C., MIDDLE EAST: Lady Margaret Alexander at a W.V.S. nursery in Regent's Park during its inspection recently by Mrs. Roosevelt. Lady Margaret, a daughter of the fifth Earl of Lucan, married General Alexander in 1931

THE RED ARMY'S ACE WOMAN SNIPER VISITS LONDON: Lieut. Liudmilla Pavlichenko has just arrived here with a Soviet Youth Delegation to study Britain's war effort. She is twenty-six, and took part in the defence of Odessa and Sebastopol: she was wounded four times, and has shot 309 Germans. This picture was taken as she inspected the Home Guard unit at the Ministry of Information soon after her arrival

SIR STAFFORD CRIPPS LUNCHES WITH TWO COMMANDERS-IN-CHIEF: After witnessing an anti-aircraft Artillery demonstration on the south-west coast a few days ago, Sir Stafford lunched at A.-A. Command Headquarters mess with General Sir Frederick Pile, G.O.C.-in-C. (in centre) and Sir Sholto Douglas, C.-in-C., Fighter Command (on right)

THE INVASION OF HORNSEY: A full-scale invasion test, in which all the Civil Defence Services and the population took part, has just been held by the Borough of Hornsey. During the exercise the Mayor (Alderman H. S. J. Williams, J.P.) was held up by Home Guards for his identity card. With him above are Sir Wilfrid Craig (on left) and Lord Southwood (in centre)

The World of Books—By Vernon Fane

NOVELS IN VARYING MOODS

Civil Servants and the Blitz; Miss Georgette Heyer's Literary Diversion; A Weighty Novel by Taylor Caldwell; A New Story by Barbara Goolden

TWO things are certain about the author of DARKNESS FALLS FROM THE AIR (Collins. 8s. 6d.); he knows a great deal about the London "blitzes," and he knows a great deal about the activities of temporary Civil Servants. Nobody without first-hand experience of these two phenomena could have written this book; few people knowing them both could have been so equally articulate about both.

Mr. Nigel Balchin's novel has a familiar wartime figure as its central character: a business man working in one of the new Ministries, doing his job with great efficiency, but often irked by the more classical methods of the permanent Civil Servants. His "schemes," intelligently worked out, practical and complete on paper, would invariably be made the subject of endless meetings by specially-appointed committees, and decisions, hopefully anticipated as brief "yes or no" affairs, would be extended into days and weeks of scrupulous explorations of avenues and overturnings of stones.

Very disheartening to the William Sarratt of the story, but not unfunny to the reader. The authenticity of the picture is something for which I am far too timorous to vouch.

Sarratt, represented in the publisher's blurb as a hard-boiled individual, I found more sympathetic than that description implies. Efficiency need not connote toughness, and here was a case, even if a fictional one, where that seemed to be proved. In his relationship with his lovely, and quite intolerable, wife he is kind to the point of weakness, and his tolerance for his motley friends shows no indication of business cynicism.

I understand this is one of Mr. Balchin's first novels, but, apart from a certain rather strained (and all-too-familiar) crispness in the love passages, it has no signs of the tyro, and I enjoyed it for its humour and its author's very considerable powers of description.

In the first sentence of PENHALLOW (Heinemann. 9s. 6d.), Miss Georgette Heyer sets the tone and pace of her new novel. "Jimmy the Bastard was cleaning boots." In a moment there is a reference to lamps and to a Master who had never installed electric light. As one settles down to discover whether Jimmy's illegitimacy is real or merely rhetorical, the thought occurs that Miss Heyer is an historical novelist, and there are seventeen books to prove it. This diversion had better be good.

Or perhaps it is one of those detective novels? No, it isn't that, though there is quite a juicy murder in it and a neat suicide. And, as if to make the gesture of virtuosity complete, the story conveys no sense of period. The occasional motor-car and such contemporary appliances could go quite easily, leaving the Penhallows to their living, tearing, family conflict. Which, I maintain, is an achievement in any novelist's career.

Old Adam Penhallow is a patriarchal tyrant who commands the rebellious obedience of his large family, mostly from the vantage-point of an enormous bed. There are six sons and a daughter by his first marriage, a weakling son of a terrified wife by his second; a bastard or two; a couple of daughters-in-law, and a sister to complete the party. Because they are Penhallows, each of these has a decided personality, and in the clash of temperament and action, we get to know them very well. There are also a number of subsidiary but complementary figures, such as the maid Loveday, whom Bert wants to marry, and who becomes a fundamental issue in the family battle.

It is a grand battle, in which little quarter is asked or given on any side. The Penhallows have not very much in common, except their strong family sense, their love of horses, and the obvious enjoyment with which they fight with each other, and buck in vain against the old man's dominance. It says a great deal for Miss Heyer's compelling sense of character and clash of character that the story holds one, in spite of the lack of action through the greater part of it.

Although we feel that, sooner or later, old Penhallow is going to cop it, his removal by the simple process of putting poison in his whisky seems almost an anti-climax. The interest is rather in the psychological build-up to the person who might be supposed to be the least likely to do it.

Even then the old man still has the power to keep the family deployed and concentrated on the battle-front, and the climax, which is indeed a climax, provides the unexpected reason for Raymond's suicide.

This is, as I have indicated, a powerful story, and it is an interesting example of how a first-rate novelist can abandon the period trappings of her accustomed technique, and gain strength by doing so.

LADY MACROBERT IN HER HIGHLAND HOME AT DOUNESIDE: Her husband died soon after the last war: her three sons have all been lost in the air. But Lady MacRobert is proud of her sons' fighting record: last year she gave £25,000 for a bomber, and this year she gave £20,000 for four fighters. All the year round, Lady MacRobert lives at Douneside, the family's home for generations, set in lovely Highland scenery; she is kept busy from seven in the morning until ten at night. At her work-desk, she is surrounded by photographs of the brave sons who have given their lives for their country

THE STRONG CITY (Collins. 10s. 6d.) has all the grey, durable qualities, and doubtless the possibilities, of unhewn granite. It also has some of its weight. No one could credit it with the more frivolous qualities of entertainment, but it has a certain implacable readability that draws one through the pages.

Mr. Taylor Caldwell is no mean story-teller, and to a work like this that is a priceless asset. The plot is strongly and clearly defined, and it has its own interest, in spite of the utter drabness of its background.

The scene that the author has chosen explains this in part. An American industrial city, dominated by a steel works, at the latter end of the nineteenth century, and populated mainly by hard-driven workers who put in a twelve-hour day six days a week, does not suggest anything but grimness, and grimness is precisely the keynote of this book.

It is the story of Franz Stoessel, a foreman at the steel works, and a man of immense and devouring ambition. He dedicates his life to the proposition that all men are unequal, and that since a ruling class does exist, he will be a powerful member of it. He achieves this in the narrow radius of his circle, sacrificing to his one-man policy family, love, friendship, loyalty, and any emotion that might be suspected of softness. At the height of his success he finds himself as lonely as he is bitter. Local boy, in fact, makes not so good. In the end, and by a process too mechanical to be really credible, Franz changes his ideas, and allows the subversive influences of affection into his life, but there is an inconsistency about this that I found rather defeating, and the book's last pages have nothing of the strength of the main narrative.

Miss Barbara Goolden's new novel, MEN AS TREES (Heinemann. 8s. 6d.), deals with a group of people diametrically opposed in thought and feeling from the dour gentleman in the book discussed above. Ross and Jane Glennie are a rich, young and idealistic couple who plan to found a village Utopia—strongly against the will of the existing villagers.

These unsympathetic rustics have been doing nicely, as they are apt to insist, with bad drainage, indifferent medical attention, lack of child welfare, and a total absence of communal life as understood by modern reformers. The Glennies' ideal state gets off to a rather sticky start, and finally disintegrates completely.

Miss Goolden writes, as always, with persuasive charm, and with irony as gentle as the brush of a writer's quill. Her novel, for all its slightness, is not the least important of the new list.

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The New London Plays

Reviewed by PHILIP PAGE

DU BARRY WAS A LADY.—Although there is plenty of crudely farcical fun—quite enjoyable if one is in the mood for it—in this American musical-comedy at His Majesty's about a cloak-room attendant who, having seen a film about Madame Du Barry, dreams that he is not only at Versailles, back in the eighteenth century, but is Louis XV himself, I found myself not only contrasting with no little regret the manners and mannerisms of modern New York with a period which, at any rate had more poise and elegance, but also recalling the fact that the Du Barry ended her career in anything but farcical fashion, for she was guillotined. Possibly an absurd attitude. The Court of Louis XV did not resemble, to say the least of it, that of our own good Queen Victoria, and no punishment need be handed out to those responsible for ridiculing it. No one concerned deserved guillotining, least of all Miss Frances Day, at the top of her most piquant form as Du Barry (who was certainly no lady), and that always delightful comedian, Mr. Arthur Riscoe, as the King. But large chunks might with advantage be lopped off the over-long first act; and Mr. Cole Porter, who is not in this play in his most inspired mood, should cut down some of his musical numbers. The second act was shorter, funnier, and better in every way.

Mr. Jackie Hunter contrived to be fairly amusing, with poor material, as the Dauphin (here pronounced "Dorfun"), and Mr. Bruce Trent suggested that he might be a good romantic singer had there been anything to be romantic about, or, for that matter, anything worth singing. A distinct hit was made by a young new-comer, Miss Frances Marsden, who can dance like a sylph, has a lively sense of comedy, and is altogether a delicious little person.

Murder from Memory.—The Ambassadors Theatre, the home of witty little revues during the last war, is a far grimmer place in this one. That sadistic orgy, *The Man With Red Hair*, has given place (after a very short run) to *Murder from Memory*, a grisly mixture of killing, psychopathic experiment, and detective sleuthing. It is, in fact, what in the film-world is called, I believe, a "whodunit," but without any of the slickness and very little of the excitement. The chief fault of the young author, Mr. Ronald Millar—who has it in him, I think, to write a good play, and I only hope that one day he will—is that he overloads his canvas. I soon lost count of how many "In Memoriam" tributes it was necessary to pay in *Murder from Memory*; one man was murdered in a train, another in an eerie country house (familiar territory, this) in which our old stage-friend, the sinister butler, also met his death. This does not include a murder (or murders?) twenty years before, connected in some way with another old friend, a terrifying portrait which follows the spectator with its eyes. Also, most characters talked too much, and in the wrong vein—Mr. Ernest Milton most of all. This was not, of course, the fault of Mr. Milton, who is an admirable actor, and did what was humanly possible with the most loquacious Sherlock Holmes in stage history. Miss Isolde Denham showed us what fine things she could do in a recent play at the Arts Theatre. It was good to see her again. And Mr. Claud Bailey cleverly gave a new twist to the "when-I-was-in-Karachi" type of comedy character.

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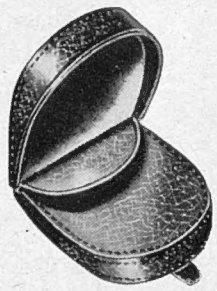

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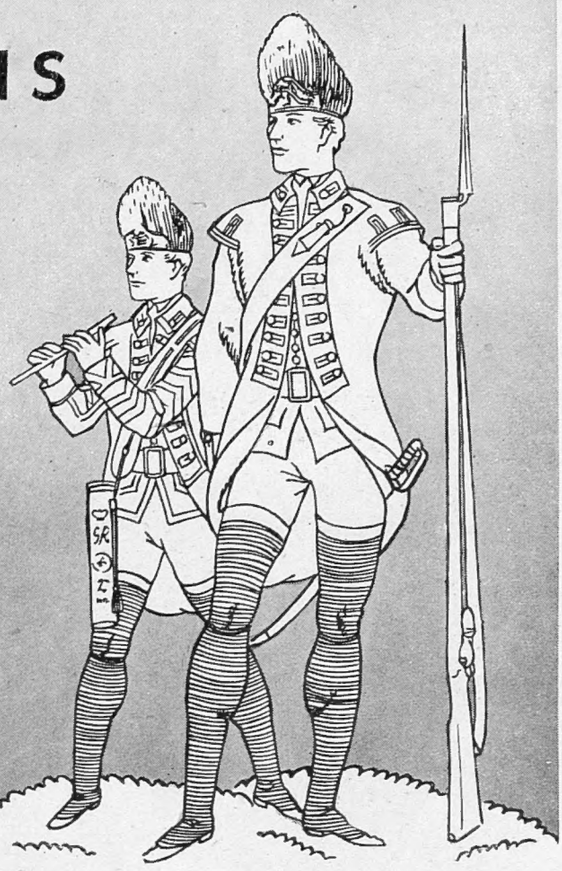

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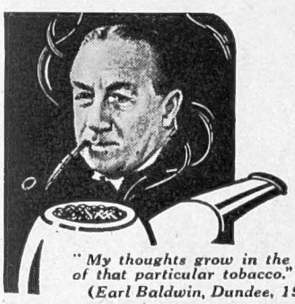

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